FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

OHIO STATE UNIVERSITY
MAY 24 1948

MAY, 1948

Tolleson, Ariz., Saw Pyrotechnics When a 10,000-Gallon Gasoline Tank Let Go. (See article elsewhere in this issue)

Guardian OF THE SMOKE EATERS

WHEN you need it, you need it in a hurry. That's when simplicity of operation counts—and dependability. Single, dual, or triple, each patient can get resuscitation, inhalation or aspiration independently. Medical research says it is far more effective than prone pressure.

Your community and your men deserve the best in modern protection—an EMERSON.

"Simplest and Safest"

J. H. EMERSON CO.

Representatives in Principal Cities

22 COTTAGE PARK AVE. - CAMBRIDGE, MASS.

The most attention-compelling visual signal yet developed! This far-reaching, constantly sweeping blade of red light, instantly identifies your emergency. Coupled with the powerful roar of the C-6 Federal Siren this Propello-Ray Light assures maximum protection for your equipment.

For long, dependable service in all seasons, under all types of weather conditions, *Specify Federal* Sirens with Propello-Ray Light. Propello-Ray Light is also available as a separate unit.

Write for Siren Catalogue showing full line of sirens and signal equipment.

FEDERAL ELECTRIC COMPANY, INC.

SIREN HEADQUARTERS

8702 South State Street • Chicago 19, Illinois

FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

CONTENTS

Vol. 101 May, 1948 No. 5

	Page
With the Editor — By Fred Shepperd	295
Public Relations Program Wins Bond Issue for Fire Department — By Paul C. Ditzel	296
What Status for Fire Service in Event of Another War?	298
Chemical Plant Gives Newark Biggest Fire in 25 Years — A Staff Report	300
Modern Community Firehouse Embodies Unusual Features	302
Fatal Blast at Fire Involving Waste Aluminum and Magnesium	304
The Watch Desk — By Roi B. Woolley	309
Short Cuts and Gadgets	310
News of the Manufacturers	311
False Alarms	312
World Wide Fire News — By Roi B. Woolley	314
Questions and Answers	316
Persons in the News	319
Correspondence	330
Annual Reports Received	331
The Round Table — The Use and Abuse of the Fire Chief's Car	332
What's Burning	337
Convention Dates	339

FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

FIRE ENGINEERING —The Pioneer

BEHIND every new product or process that achieves wide acceptance is an energizing force that "sold the idea" of that product or process to an indifferent and sometimes antagonistic world.

● In the fire service, that "selling force" is FIRE ENGINEERING.

● In its busy 71 years, FIRE ENGINEERING has introduced, pioneered and helped popularize every worthwhile improvement in the vast and complicated business of fire protection . . . advancements such as gasoline-propelled apparatus and larger capacity pumps . . . enclosed fire apparatus . . . metal ladders . . . the use of foam . . . water-fog . . . fog nozzles . . . fog foam and "wet water", to name a few!

● FIRE ENGINEERING also espoused better fire service communications — the fire alarm telegraph . . . radio . . . message transmission by "wired radio", and teletype and voice amplification. Further, FIRE ENGINEERING has consistently campaigned for better working conditions for firemen . . . promotion by civil service . . . adequate pensions — and proper training for all ranks.

● While FIRE ENGINEERING was "selling the idea" of these improvements in fire fighting facilities and methods in its *editorial columns*, enterprising manufacturers were using its *advertising sections* to gear their own product messages to this editorial energy.

● Today — as for 71 years — you'll find what's new is "pioneered" in FIRE ENGINEERING.

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.00 a year; Foreign, $4.00; Single copies, 35c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1948, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Eastern Representative, ALFRED J. HOUGHTON; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 8 So. Dearborn St., Chicago 3, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

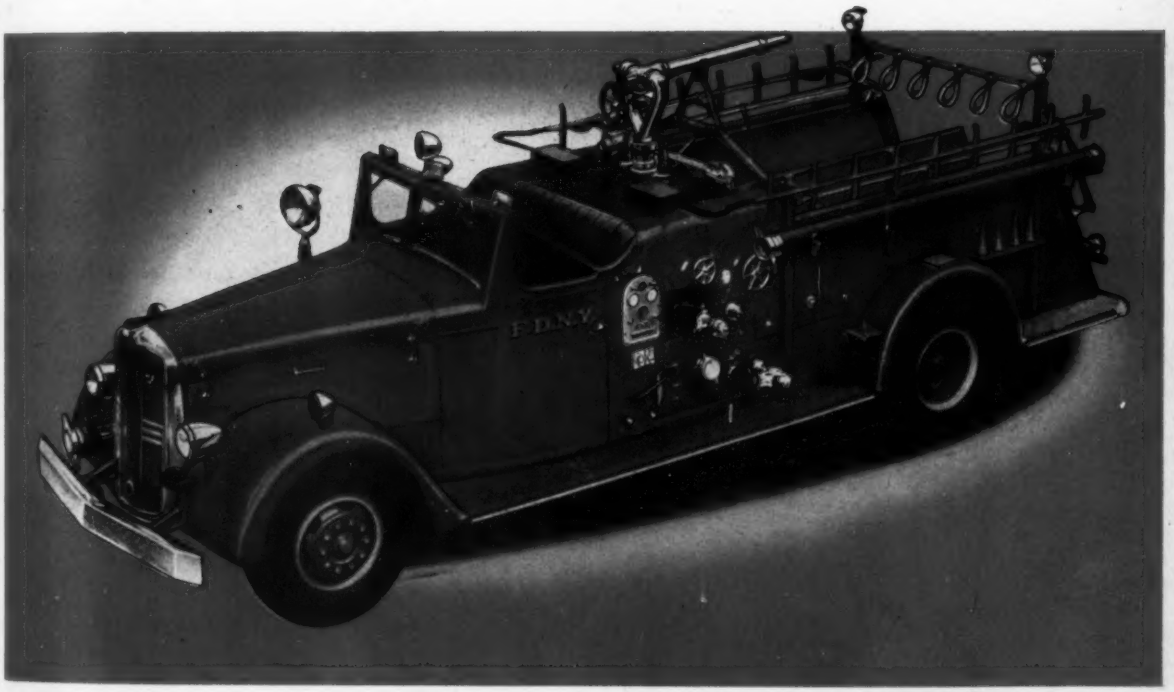
A CASE-SHEPPERD-MANN PUBLICATION
"Specialized Leadership"

PERFORMANCE

BY WARD LA FRANCE

PROVED

BY UNIVERSAL ACCEPTANCE



The basic design of the present Ward LaFrance pumpers has been proved by actual in-use testing for over twelve years and by universal acceptance among fire apparatus designers. There can be no better evidence of the value of fire fighting features built into Ward LaFrance apparatus.

Ward LaFrance engineering and manufacturing experience is ready to serve you in designing the apparatus best suited for your community's fire department.

WARD FIRE APPARATUS LA FRANCE

Ward LaFrance has a profitable opportunity for an experienced fire apparatus sales organization. Write for details.

WARD LA FRANCE TRUCK CORPORATION

ELMIRA, NEW YORK

It will help if you will mention FIRE ENGINEERING *when writing advertisers*

Have You Money to Burn?

NO SENSIBLE PERSON would burn *money*. Yet every year in the United States over $600,000,000 goes up in smoke.

You are already paying part of this bill in higher insurance rates. Yet you stand to lose much more if fire strikes *you*.

Loss of production time, loss of property that cannot be soon replaced, loss of standing in the business community, loss of life itself—these are losses that can never be repaid.

To guard against such losses, equip your home, car, boat, and place of business with QUICK AID Fire Extinguishers. There is a QUICK AID FIRE GUARD for every fire hazard. Consult your dealer or write for free copy of "Your Fire Protection Insurance Policy."

GENERAL QUICKAID FIRE GUARD

THE GENERAL DETROIT CORP.

DETROIT 7, MICHIGAN
NEW YORK • PHILADELPHIA • ATLANTA • CHICAGO • DALLAS
Subsidiaries:
THE GENERAL PACIFIC CORP.
LOS ANGELES • SAN FRANCISCO • SEATTLE
THE GENERAL DETROIT CORP., CANADA, LTD.
TORONTO • MONTREAL

This hose fights fires— not firemen!

New B. F. Goodrich hose weighs 18% less, is stronger, and easier to handle

A HEAVY, stubborn, hard-to-handle hose line can actually *hinder* your fire company, slow it down, make it waste precious strength and minutes fighting a stubborn, hard-to-handle hose line. To *help* you fight fires, the weight-saving, time-saving features of new B. F. Goodrich municipal fire hose cut carrying weight 18%, cut coupling time in half, increase flexibility and ease of handling. Every part of this new hose—tube, jacket, and coupling—is designed to help you fight fires faster and more efficiently.

Tube cuts weight, friction—increases capacity. A new rubber compound allows use of a thinner, lighter tube, with greater capacity. Improved aging qualities prevent fold or edge cracking that cause failures in service. Hose lines for modern fire fighting need the smooth inner surface of this tube that reduces friction loss of high velocity flow—delivers maximum volume at the nozzle.

Jacket's lighter, stronger, resists moisture. To weave a better jacket B. F. Goodrich uses a larger number of smaller gauge cords —twice the number of warp strands, 25% more filler strands. It twists them by a new method that increases tensile strength, weaves them on looms that maintain uniform strand tension, then pre-stretches the woven jacket. The result: a hose that's lighter and easier to handle, yet behaves under pressure. Hydroseal-treated to protect from rotting, waterlogging, freezing and mildew, the tough jacket withstands all the abuse a fire hose is subject to.

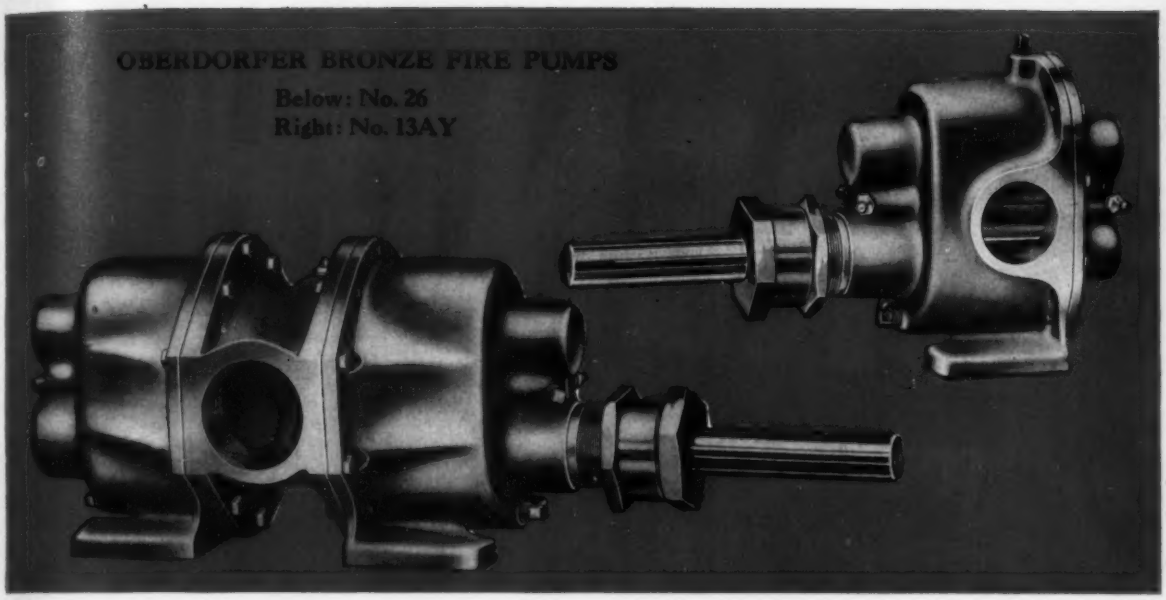
All types of couplings. This new B. F. Goodrich fire hose is available in cast brass, drop forged brass, or aluminum alloy coupling that weighs 4 pounds less than brass or bronze, but has greater tensile and shear strength. With Koroseal swivel gaskets these couplings spin on and tighten by hand in half the usual time. Severe accelerated corrosion tests indicate the best corrosion resistance of any lightweight coupling on the market. It's the only lightweight coupling approved by Underwriters' Laboratories.

Before you buy fire hose again get full details on this new B. F. Goodrich municipal fire hose, at your local distributor or write: *The B. F. Goodrich Company, Industrial Products Division, Akron, Ohio.*

B.F.Goodrich
FIRST IN RUBBER

Oberdorfer #26 Pump operating from booster tank in Portsmouth, New Hampshire.
(Tips ½", ¼", ½")

OBERDORFER



Greater pump efficiency and longer life proved by actual experience

Year after year, hundreds of municipalities steadily purchase Oberdorfer Fire Pumps for their fire fighting equipment. They do this because long experience has amply proved the strength of Oberdorfer claims to finer performance, longer life, and lower pump costs. Here are actual performance records of the Oberdorfer Fire Pumps shown above:

Pump No.	Pump Shaft RPM	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Volume in Gal. Per Minute
13	1600	120	500′—1½″	15′	75
13	2000	100	500′—1½″	15′	100
26	1600	120	500′—1½″	15′	150

The #13 Oberdorfer Pump lists at $69.00; the #26 at $172.50. Both are *corrosion-resistant all-bronze construction* with stainless steel shaft, assuring longer useful life than iron pumps costing far more.

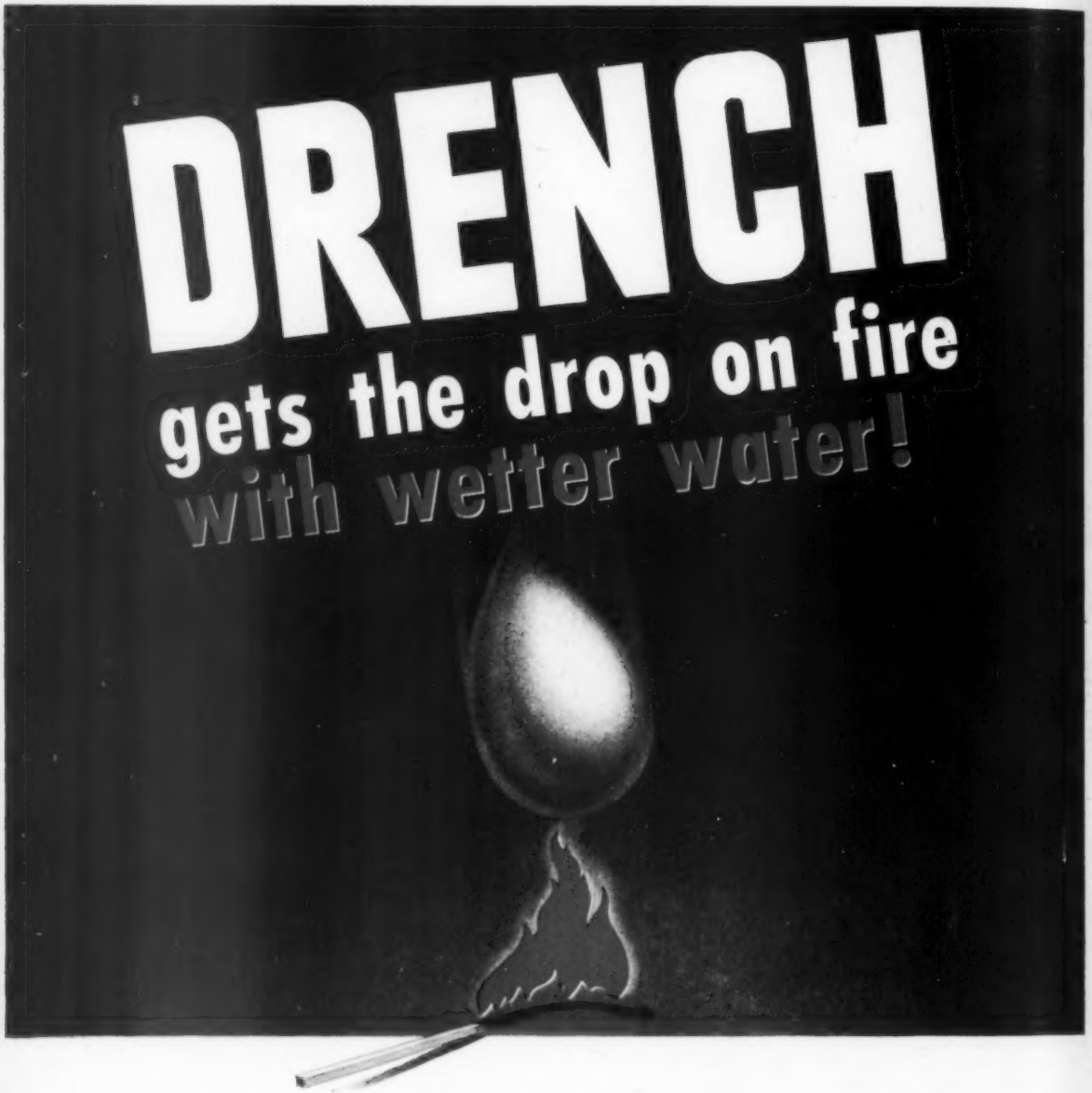
If you want the maximum in efficiency, performance and long life for your department's pump dollar, it will pay you to specify Oberdorfer Bronze Fire Pumps. Write for catalog and name of distributor in your vicinity.

OBERDORFER FOUNDRIES, INC., SYRACUSE, NEW YORK

Fire Pumps

DRENCH

gets the drop on fire with wetter water!



For faster, more complete fire extinguishing action, add Drench* to your water supply.

Yes, Drench makes wetter water . . . the most widely discussed advancement in the fire fighting industry. Tried and proved under actual fire conditions, Drench is the wetting agent that helps you fight fire faster, knock it down and keep it down.

Drench effectively changes the characteristics of water *without limiting its use or requiring special equipment.* Use it on all "Class A" fires and on oils with flash points over 100° F., with any type of nozzle equipment, including straight stream high and low velocity fog and high pressure fog nozzles. It leaves no harmful residue.

Join the hundreds of fire companies and departments who now use Drench in their portable equipment and booster tanks. Write us today for more information about Drench and how it will help you fight fire faster.

Ask your supplier for Drench, the tried and proven wetting agent.

Send for free copy of corrosion report by independent laboratory.

ARNOLD-HOFFMAN & CO., INC.

Fire Specialties Division

PROVIDENCE, R. I.

Established in 1815 • Plants at Dighton, Mass. and Charlotte, N. C.

NEW YORK • BOSTON • PHILADELPHIA • CHARLOTTE

*Trademark Reg. U. S. Pat. Off.

David Crockett Steam Fire Co. No. 1
GRETNA, LA.

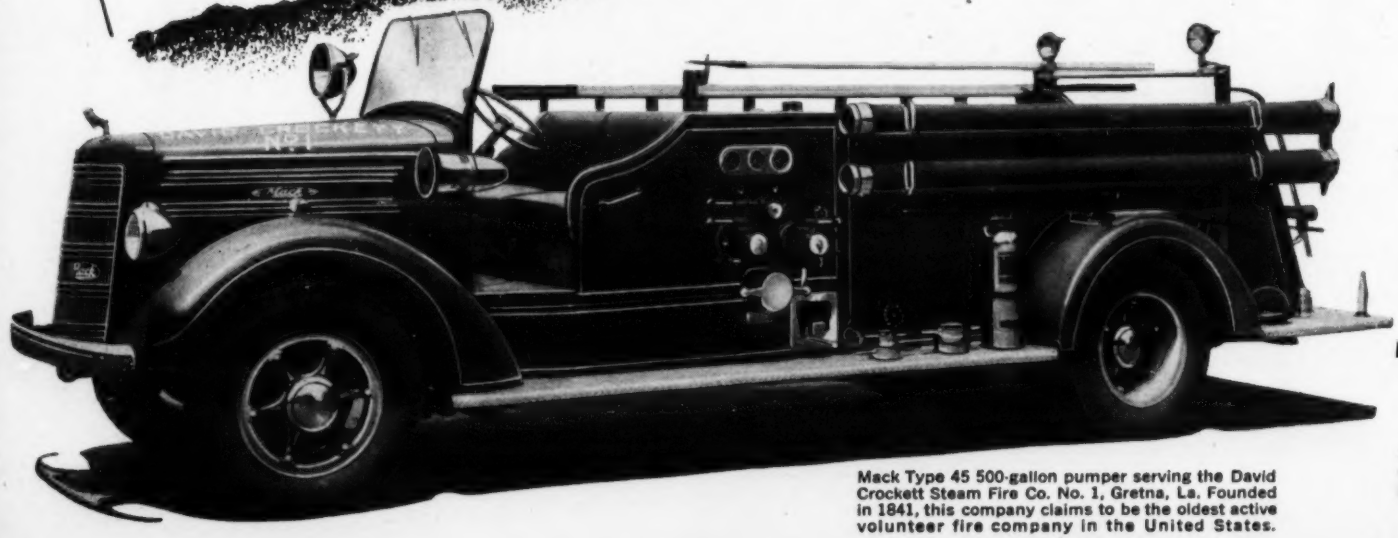
MOTTO:

"Be Sure You're RIGHT, then Go Ahead!"

"...Before our Company bought, we set up a committee to study every make. As you know, we chose Mack for two reasons: First, because a Mack was the quality type of equipment we desired; second, we knew Mack was the only manufacturer maintaining a parts and service department within 500 miles of our town. No single factor swayed our minds more to buy Mack than the service angle. How truly our judgment has been vindicated!"

Lee Ballinger
PRESIDENT

"Be Sure You're Right, Then Go Ahead" . . . that's the motto of David Crockett Steam Fire Co. No. 1, reputedly the oldest active volunteer fire company in this country. And that's the advice that the "brothers" in Gretna, La., followed when they Modernized with Mack. Like 1,000 other communities, they've found that Mack is *Right* for apparatus best suited to their needs . . . and *Right* for fast and accurate service.



Mack Type 45 500-gallon pumper serving the David Crockett Steam Fire Co. No. 1, Gretna, La. Founded in 1841, this company claims to be the oldest active volunteer fire company in the United States.

Mack

FIRE APPARATUS

MACK MANUFACTURING CORP.
Fire Apparatus Division
Long Island City 1, N.Y.

Over 700 factory branches and dealers for parts, service throughout the country. In Canada, Mack Trucks of Canada, Ltd.

6523

TRIPLE COMBINATION PUMPERS — 500 TO 1500 GALLONS . . . SQUAD WAGONS . . . CITY SERVICE AND QUADRUPLE COMBINATION LADDER TRUCKS

We shall appreciate your mentioning FIRE ENGINEERING when writing advertisers

MIDWESTERN
Protective Clothing
for Men of Action!

Here's Protection and Comfort in Your Hazardous Work of Safeguarding Life and Property Against FIRE!

Modern fire fighting calls for ***specialized*** protective clothing . . . clothing that safeguards the fireman's life on every run . . . clothing that enables him to use his equipment to the fullest advantage.

Every Midwestern product combines the thoughts and suggestions of practical Fire Chiefs and firemen from every section of the country . . . and every purchaser profits from years of Midwestern research and experience. That is why the famous Mackinaw Coat and other Midwestern clothing have embodied in their design every feature necessary for the protection and comfort of firemen.

In our vast selection of crude rubber materials you will find a type of fabric suitable for your climate and needs. The softness and flexibility in the high-grade materials used are your assurance of long time service and comfort. Many Fire Chiefs are now including Midwestern clothing in their regular yearly budget and, by placing your order early, you can be assured of this adequate protection when needed.

For complete information, have your Midwestern dealer show you our new garments now manufactured from crude rubber compounds. A letter to the factory will also bring you material samples for your inspection.

We now have available: White, Ivory and Brown crude rubber coats for Chiefs, Assistants and other officers; also all sizes short and ¾ length felt lined Firemen's boots for immediate shipment.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO., Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Coats**

NEW POLICE "NERVE CENTER" STANDS GUARD OVER WASHINGTON

Federal Remote Control Streamlines Mobile Radio for Police in District of Columbia

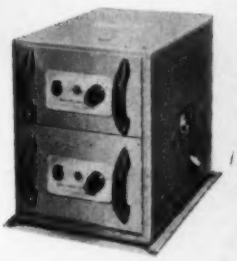
Now police radio dispatching has a broader range...higher efficiency...greater accuracy...for the better protection of our national capital.

A new system using two Federal Remote Control Consoles eliminates telephone relay of messages from the Communications Center to the transmitter several miles away. Time is saved and possible errors are avoided by talking direct to 105 radio patrol cars from the Center.

Now the Center is also in immediate contact at all times with the metropolitan fire department and the police forces of the adjoining county and state.

Calls received over 10 telephone trunk lines are diagnosed on the spot and routed by radio or telephone. Even the few seconds required to fill out a complaint form can be eliminated by simultaneous listening control. Notified by a flash, console operators actually can listen in on a call as it comes through the switchboard. A log record is kept of all calls received, and there is automatic teletype follow-up to precinct stations.

The Washington Police Department, after exhaustive study, specified Federal 106-A Remote Control as the best designed "nerve center" for this new network of protection. The Remote Control Console is only one unit of the complete line of Federal Mobile FM Radio Telephone Equipment – for police and fire departments, taxis, buses, service cars—"for anything that moves." For complete information, write to Department I-490.



KEEPING FEDERAL YEARS AHEAD... is IT&T's world-wide research and engineering organization, of which the Federal Telecommunication Laboratories, Nutley, N. J., is a unit.

Federal Telephone and Radio Corporation

100 KINGSLAND ROAD, CLIFTON, NEW JERSEY

In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q.
Export Distributors: - International Standard Electric Corp. 67 Broad St., N. Y.

"Going right in" prevents conflagration, keeps small fires small.

Records of about ninety fire runs in a year are overwhelming in favor of high pressure at Rock Falls, Illinois (population 7,500), a factory town where main protection comes from their FMC High-Pressure Fog Fire Fighter.

Rock Falls' Department has achieved wonderful results in controlling fires—so quickly, so efficiently that high pressure does almost *all* the work, keeping small fires small.

PROOF INDISPUTABLE

Fast work saves precious minutes

That's the way it is in other cities, towns and villages using FMC High-Pressure Fog Fire Fighters. They go in fast—save precious minutes at the critical time of the fire—knock it down with very little water—and cause practically no water damage.

Every day, users are showing indisputable proof that high pressure, properly used, works fast to keep potential conflagrations from developing out of small fires.

You owe it to the people you protect to investigate FMC High-Pressure for your Department. Get the facts!

OLIVIA, MINN. *Standard FMC High-Pressure Fog Fire Fighter recently delivered to Olivia Fire Department. Completely equipped to fight fires fast!*

CHASSELL, MICH. *Standard FMC Fog Fire Fighter delivered to Chassell Fire Dept.*

CARTHAGE, ILL. *Standard FMC Fog Fire Fighter delivered to Carthage Fire Dept.*

CASCADE, WIS. *Standard FMC Fog Fire Fighter delivered to Cascade Fire Dept. No. 3.*

UNDERWRITERS' LABORATORIES APPROVED

ROCK FALLS, ILL. *Standard FMC Fog Fire Fighter recently delivered to Rock Falls Fire Dept. No. 1. Carries its own water supply—provides two guns of 30 gallons each—850 lbs. pump pressure—complete in every respect.*

FMC *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY CORPORATION

JOHN BEAN MFG. CO., DEPT. 126, LANSING 4, MICH. • BEAN-CUTLER DIVISION, 409 JULIAN ST., SAN JOSE, CALIF.

BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

TOLEX FIRE-RESISTANT UPHOLSTERY AND WALL COVERINGS

. . . EVER-WATCHFUL PUBLIC DEFENDER!

TOLEX F. R. (plastic leathercloth certified to be fire-resistant by New York City, Boston and other large communities) is welcomed by owners of establishments who *must* think about safety *for* their customers. Wherever people congregate, TOLEX F. R. is a "natural" for upholstery, wall coverings and other interior decoration—in cocktail lounges, hotels, theatres, restaurants, apartment buildings . . . railroad cars, buses, watercraft. For in addition to its fire-resistance, it is colorful, tough and long-lasting, easily cleaned and kept fresh and beautiful.

A member of our technical staff will gladly discuss specifications and test methods with you, your fire authorities or underwriters. Textileather Corporation, Toledo, Ohio.

TOLEX* CAN TAKE IT!

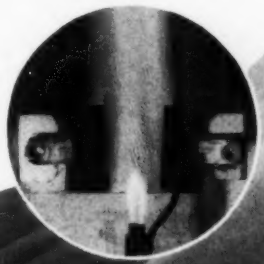
**Reg. U. S. Pat. Off.*

PIONEERS IN THE DEVELOPMENT OF FIRE-RESISTANT LEATHERCLOTH

TEXTILEATHER*

NOT LEATHER

Flame tests demonstrate fire-resistant qualities of TOLEX F. R.



Choose your Radiotelephone on the basis of

FACTS" ...NOT BRAGS"

Radiotelephone is too important an investment to be made on the basis of high-flown phrases and advertising slogans. It's easy to make claims that can't be proved and to so word statements that they seem to mean more than they do.

So, choose carefully. Make sure that claims are provable, that features mean something, and that specifications are understandable. The best test is to talk to people who have bought the equipment in question. Is it performing according to claims? *How much does it cost to maintain?* What kind of service does the manufacturer give? The manufacturer who has nothing to hide will welcome your skepticism.

Here are the *FACTS* about *Motorola* -compare them with all the others:

INDUSTRY LEADERSHIP

Motorola manufactures and installs more radiotelephone equipment than any other — BAR NONE. Motorola has more fully qualified mobile-radio developmental engineers in their laboratories devoting time *exclusively* to mobile radio problems than any other manufacturer — BAR NONE. Motorola has the largest mobile radiotelephone research laboratory and offers more product development than any other — BAR NONE. Motorola has pioneered more FM mobile radiotelephone "firsts" than any other manufacturer — BAR NONE: FIRST with 20 D.B. quieting at 0.4 microvolt input. FIRST commercially successful FM 2-way radiotelephone with FIRST noise compensated squelch that makes present day radio communications practicable. FIRST to successfully build equipment for the 152-162 mc. band. FIRST to develop the vibrator power supply in receivers, now accepted as the best power supply system. FIRST with "Precision Selectivity" for channel conservation. FIRST with Precision Cavity for intermodulation control.

ADVANCED DESIGN

Only Motorola guarantees full channel utilization through "PRECISION SELECTIVITY." P.S. provides extraordinary channel protection from nearby central stations and other man-made interference. Motorola's advanced design is your guarantee against early obsolescence.

OVER-ALL COST

It's been proved — Motorola continues to operate when others fail. *Motorola takes less time out . . . costs you far less over the years than any other equipment regardless of initial price!*

PROVED PERFORMANCE

Hundreds of official records show Motorola equipment giving "like-new" service for over six years — with only limited routine maintenance required. Part for part, Motorola is the sturdiest equipment in the field today — and Motorola's rugged construction pays off for you.

VERIFY THE FACTS WITH THE PEOPLE WHO USE *Motorola* EQUIPMENT

A Motorola Communications Engineer will be glad to call and discuss radiotelephone as it concerns your specific problems. He'll put you in touch with people in your business who are using Motorola equipment. He'll give you FACTS, not fiction, FIGURES, not fables —

Write Today!

Motorola Inc.

COMMUNICATIONS DIVISION · Chicago 51, Illinois

In Canada: Rogers Majestic, Ltd., Toronto-Montreal

Motorola FM 2-WAY RADIOTELEPHONE

GUARDING THE LIVES OF MILLIONS FROM COAST TO COAST

SINCE THE FIRST
MARS SIGNAL LIGHT

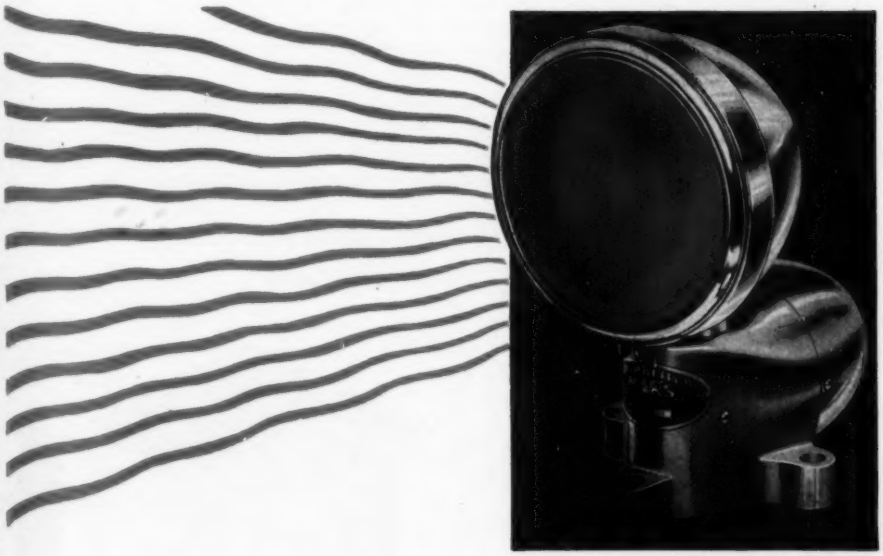
Was Sold to the Milwaukee Fire Department Fifteen Years Ago

MORE THAN 11,000 MARS SIGNAL LIGHTS

Have Been Installed on the Fire Apparatus of Over 300 Cities and Towns

SO FAR AS WE KNOW
ALL OF THESE LIGHTS ARE STILL GIVING SATISFACTORY SERVICE!

WHY BUY ANYTHING BUT THE BEST?



Mars Light Is Fully Guaranteed for Five Years
Mars Has Never Failed to Back Up This Guarantee and Never Will

WHEREVER SAFETY OF FIREMEN, APPARATUS AND THE PUBLIC IS THE FOREMOST CONSIDERATION YOU'LL FIND FIRE DEPARTMENTS USING AMERICA'S FOREMOST WARNING SIGNAL LIGHT

IMMEDIATE DELIVERY

For prices and complete information write to

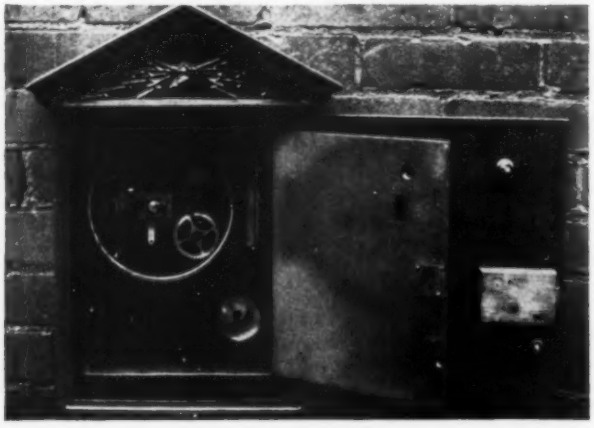
MARS SIGNAL LIGHT CO. 5737 W. DIVISION ST. CHICAGO, ILL.

It's MARS from Coast to Coast

Insist on MARS when you order New Equipment
—Install it on Present Equipment.

Kindly mention FIRE ENGINEERING *when writing advertisers*

WHY CITIES PREFER GAMEWELL



Replaced after 52 years service — Without repair during that period.

The service record of Box 14 is not an isolated instance; it is but one of many. Gamewell Fire Alarm Systems have demonstrated their durability and efficiency for nearly a century — which explains the universal preference for them. Expenditures for adequate fire alarm box distribution should be regarded not as expenses but as sound investments in public safety.

THE CUMBERLAND NEWS, CUMBERLAND, MD., TUESDAY, MARCH 2, 1948

Fire Alarm Box 14 Gets Honorable Discharge After 51 Years' Service

Original System Was Installed In 1896

Fire Alarm Box No. 14, which has stood on guard at the corner of Washington and Allegany Streets for more than half a century, received an honorable discharge yesterday.

Fire Chief Reid C. Hoenicka said that No. 14 was the last of the 12 original fire alarm boxes which were placed in operation here on October 27, 1896.

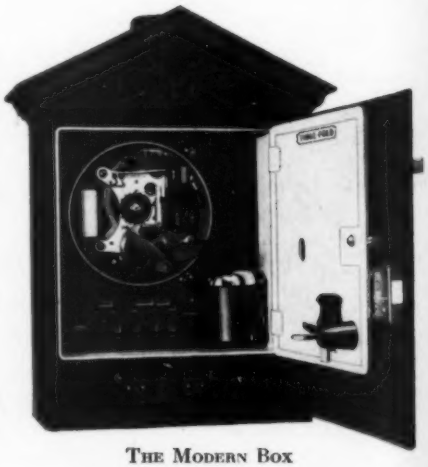
Chief Hoenicka, assisted by Eugar P. Libie, maintenance electrician, and Walter Jenkins, general maintenance man, yesterday replaced the faithful alarm box with a modern mechanism similar to those used in the other 74 alarm boxes of this city.

Firemen said that No. 14 has never been repaired during its long service.

In the 40 Years Ago column of the September 22, 1936, paper appeared the following:

"The Gamewell Electric Fire Alarm and Telegraph Company, New York, accepted the contract for the erection of its system in Cumberland, as modified by the City Council and was to commence work at once."

Obsolescence due to the production of later models of greater efficiency — not deterioration — is the principal cause of retirement from service of Gamewell boxes.



THE MODERN BOX
THREE-FOLD TYPE

THE GAMEWELL COMPANY

NEWTON UPPER FALLS 64, MASSACHUSETTS

In Canada: Northern Electric Company, Ltd., Montreal

FIRE ENGINEERING

MAY, 1948 VOL. 101, NO. 5

With the Editor

No Time For Delay!

Putting it bluntly, the fire service today faces one of the most critical periods in its history. Upon the action now and in the immediate future may depend not only the future of the service itself, but its ability to adequately safeguard the nation against fire, whether imposed by an outside enemy or, as in the past, by our own carelessness and indifference.

Whether we like it or not, these facts are self-evident: (1) The threat of another war hangs over us and grows more imminent every day; (2) The nation is embarking on a speeded-up preparedness program running into the billions, which includes stockpiling of critical materials, and which may result in reinstitution of government controls over all manufacturing plants which are or may be essential to the prosecution of war; increasing concentration by many industries on priority defense orders; (3) The vast European Relief Program, to cost additional billions, will impose added burdens to the nation's domestic economy; (4) All of this, together with rising labor costs, unsettled labor market, and other inflationary trends, is having, and will have profound bearing on the cost of maintaining and strengthening a fire service not yet recovered from the deprivations of World War II; (5) This is a national election year—which always has its effect on government budgets.

Plans for civilian requirements in case of war have not been made as a part of the over-all reorganization of the national military establishment. In the next war, we are told frankly that "the reduction of the civilian economy will have to be absolutely brutal."

Even if we discount the possibilities of war, the fact remains that the large-scale preparedness program, and the Marshall Plan will revise the nation's industrial production calculations. This revision cannot fail to have its impact on the suppliers of fire service essentials—apparatus, equipment, housing, shops, etc.

Thus, suppliers will be caught in another squeeze in the matter of costs and deliveries before they have recovered from the postwar production pinch of World War II. Before they have had opportunity to catch up on the back-log of postwar orders for the fire service, they now face the possibilities of legislated priorities, or at least of voluntary selective deliveries. Before they could stockpile essential materials to insure anything like prompt deliveries on future orders, scarcities of materials have begun to increase.

This isn't comforting reading to the municipalities that cut budgets for needed apparatus, fire stations and other essentials, or postponed their order until conditions were more favorable; nor is it good news to the conscientious fire chief who is being called upon to fight more fires, and more serious fires, daily, with obsolete and outmoded fire fighting facilities. But these are the facts. The next question, logically follows: since this is the case, what's to be done about it?

The first thing is to review and re-estimate the needs of the fire service in the light of the foregoing. Then, to re-evaluate existing fire protection facilities and determine the facilities that must be added to care for present and future requirements, not forgetting the possibilities of wartime emergencies.

The next step is to put these imperative needs in writing and to place the data before those persons responsible for maintaining the fire services of the community, and before the taxpayers who foot the bills.

At the same time it will do no harm to remind those authorities that the present bond market is favorable to immediate purchasing of these essentials, and to remind them that all the weight of evidence points to the fact that, from every viewpoint, today is the time to order critically needed materiel for the outstanding emergency service that may be called upon to spearhead the nation's defense in the swift, and sudden catastrophe, of World War III.

Fred Sheppard

Public Relations Program Wins Bond Issue for Fire Department

Chicago Citizens Answer Plea for New Apparatus By Overwhelming Approval of Bond Issue

By PAUL C. DITZEL

THE problem confronting Chicago, Ill., Fire Department officials is not unique. Fire apparatus in Chicago and many other large cities is too old and outmoded to be depended upon for efficient operation in an emergency.

After years of disappointments in requesting funds to purchase modern equipment, it was up to Chicago's Fire Commissioner Michael J. Corrigan and Chief Fire Marshal Anthony J. Mullaney to obtain necessary money for new equipment or face disaster if a conflagration threatened the city.

It had been 27 years since the City Council had seen fit to make an appropriation for new apparatus. In 1921 it granted the fire service $1,126,560. The money was to be used for final motorizing of the fire department and was spread over a three-year period.

Since 1921, therefore, when horse-drawn rigs were being replaced by motor-driven apparatus, there had been no overall program for rehabilitation or replacement of antiquated equipment. Through the years the department requested additional appropriations of $500,000 and $600,000 but the requests were refused or substantially reduced.

When the depression came, City Council purse strings grew even tighter. Then the Second World War stymied improvements because of wartime shortages and priorities. Since the war, rising prices have arrested hopes of purchasing new apparatus out of annual appropriations by the City Council.

Salaries absorb 95% of the yearly budget. That leaves only 5% for administrative expenses and maintenance of all fire-fighting apparatus. Despite the fact that Chicago is one-half the size of New York City in population, Chicago's fire department budget amounts to only one-fourth that of New York.

Average Age of Equipment 25 Years

This apathy on the part of the city fathers is reflected in the average age of apparatus. The department has approximately 450 pieces of equipment. This includes 143 engines, 58 hook and ladders, 12 rescue squads (which are also used for general fire duty), and miscellaneous equipment such as pressure wagons, water towers, light wagons and official automobiles.

The average age of all equipment is 25 years.

From the above figures Commissioner Corrigan has pointed out that 112 pumpers out of the total of 143 have been in service for more than 25 years. Of the 58 hook and ladders owned, 47 have been in use for an average of 30 years.

The point has long since arrived when the department considers a piece of equipment new if it is less than 10 years old.

This is not to intimate, however, that no new equipment has been placed in service in the past decade. New apparatus has been purchased from annual appropriations, thus neglecting needed fire station repairs and other improvements.

Fundamentally, therefore, the problem was to obtain the necessary money for new apparatus—and to obtain it fast. Commissioner Corrigan and Chief Mullaney decided that the job could not be done for less than $1,500,000. Such a large sum, however, would have to be approved by a referendum submitted to the voters.

$1,500,000 Bond Issue

The City Council, on September 29, 1947, approved an ordinance which prodived for a bond issue to raise the $1,500,000 for new fire apparatus. But the city law department was unable to prepare the referendum in time for the mayoralty election. So the matter had to be shelved until the judicial election on November 4, 1947.

The ordinance, as finally approved, provided for the referendum to be stated in this manner:

"Shall bonds of the City of Chicago in the sum of One Million Five Hundred Thousand Dollars ($1,500,000) be issued by the City of Chicago to pay the cost of acquiring fire extinguishing apparatus and equipment, said bonds to bear interest at the rate of one and one-half per cent (1½%) per annum, payable July 1, 1948, and to mature January 1, 1958, $150,000 optional on January 1 of each of the years 1949 to 1957 inclusive, or on any interest payment dates thereafter, and a tax be levied to pay the principal of and the interest on said bonds, all as provided by an ordinance adopted by the City Council of said City on the 29th day of September, 1947, entitled 'Ordinance authorizing the issuance of $1,500,000 Fire Department Equipment Bonds of 1947 of the City of Chicago, and providing for the levy of taxes for payment thereof'?"

Space was provided for the citizen to record his approval or disapproval.

The fire department bond issue was not the only referendum on the ballot. Other referendums looked for the approval of Cook County money requests for voting machines, improvements in the County hospital, County home, and Juvenile detention home.

City of Chicago referendums also included proposed slum clearance, housing projects, police department equipment, voting machines, and a "City and Village Act" dealing with redistricting.

The first step was completed. It was now up to Commissioner Corrigan and Chief Mullaney, as well as the entire personnel of the department, to acquaint the public with the problems of the fire service and to secure the citizens' cooperation in the department's quest for funds.

The problem was not easy. Rising costs of government coincided with the general price rise. Citizens everywhere were demanding strict economy in their government. It looked like a difficult job to persuade citizens that municipal fire efficiency in Chicago depended upon their approval of this referendum. Moreover the department had to compete, as it were, with other measures requesting money.

Inasmuch as there was no money available for such a publicity program, Commissioner Corrigan and Chief Mullaney solicited the cooperation of local newspaper editors, radio commentators, labor union leaders, business men, civic groups, women's clubs, and such fraternal organizations as the Lions and Kiwanis. The editors of 44 neighborhood weeklies were contacted in a determined effort to acquaint the public with the fire department's precarious position.

Chief Mullaney's letter to these groups pointed out the old age of Chicago's fire equipment. It brought in the report of the recent President's Conference on Fire Prevention which mentions the effect of antiquated apparatus on rising fire losses. The letter concludes with a plea for the support of the bond issue.

Cooperation of Press and Radio

Prepared newspaper and radio releases were not issued. Instead the points the department wished to be placed before the public were explained to newspaper editors and radio commentators. The complete support of all these groups was unhesitatingly pledged.

Some of the letters and newspaper clippings, now on file, demonstrate the results of Commissioner Corrigan's and Chief Mullaney's efforts.

In the October 25, 1947, issue of the Chicago "Defender," an organ of the Negro people in Chicago, there appeared a story headlined "FIRE DISASTER LOOMS FOR LACK OF NEW EQUIPMENT." Beside this story there was a picture of a mass funeral for 10 colored persons who perished in a west side tenement fire. This picture and story was captioned "10,000

View Charred Remains of Tenement Firetrap Victims."

For these people, at least, the impending danger of a serious conflagration in Chicago was well upon them.

Samuel Levin, manager of the Amalgamated Clothing Workers of America, said in a letter to Commissioner Corrigan:

"I am happy to tell you . . . we distributed 350,000 special leaflets to all CIO members, as well as other literature urging favorable action on this and other Bond issues which I felt were vital to the welfare of Chicago."

Perhaps the most interesting of all the efforts to interpret the fire department's needs to the public were the two radio broadcasts. In these, as in all other publicity gestures, attention was called to the old age of apparatus now in service.

The broadcasts, in addition to numerous spot announcements prepared by radio stations themselves, were scheduled just prior to election. Thus, it was hoped, the public, when it went to the polls, would not have forgotten the fire department's plea.

The first program was a wire recording made at the fire department shops and rebroadcast over Station WGN at 5:45 P. M., Saturday, November 1, three days before election. It began with the grinding sound of an old fire engine being cranked. A comparison was made between the antique fire engine and an old Stanley Steamer automobile.

Commissioner Corrigan was then interviewed by the narrator:

"As our equipment grows old it becomes more difficult for us to combat the growing number of fires in Chicago. We are doing the best we can with the apparatus we have. But much of our equipment has reached the point where it no longer can be repaired by practical means."

Chief Fire Marshall Mullaney said, "In a modern fire department you can't have sufficient operation when you team up thoroughbreds with plowhorses. The average age of our hook and ladder unit is 27 years. The tractors that pull them are newer. They average about 15 years of age."

Both Commissioner Corrigan and Chief Mullaney told of their blocked efforts, through the years, to secure adequate apparatus replacement funds. They then appealed to the listeners to approve the bond issue at the polls the following Wednesday.

James M. Gleason, engineer in charge of equipment maintenance, spoke of present "cannibalistic" practices in the repair shops.

"It ('cannibalism') means stripping good parts from one truck or engine to provide replacement items for other similar units," he said. "What it amounts to is immobilizing one unit to keep perhaps 10 units in service. In the long run it's robbing Peter to pay Paul."

The startling fact that only one-fifth of Chicago's fire apparatus has four-wheel brakes was also interjected. Engineer Gleason further described how his shops often make their own replacement parts in cases where manufacturers no longer stock parts because the particular item is so out of date.

Jim Hurlbut, a local radio commentator, made the fire department's problem the basis for one of his radio broadcasts over WMAQ on Sunday, November 2, two days before election. The story, entitled "43 Years a Hayrack," was a biography of Hook and Ladder Six.

This particular piece of apparatus, it was pointed out, went into service in 1904, the year following the disastrous Iroquois Theatre fire. Woven into the narrative were frequent referrals to historical events of the years:

"And now, it's 1910. 'Chinatown' is the Number One tune on the 1910 Hit Parade. Hook and Ladder Six . . . is a half dozen years old and has run to thousands of fires. The big ladder is still functioning smoothly for all the times it's been raised and lowered.

"And these are the headlines—Los Angeles Times newspaper plant bombed. 21 killed . . . Bitter contest in Washington over seating Senator William Lorimer of Illinois. Election frauds charged. . . . Then, early in the morning of December 22nd, the tragic event that sweeps everything else off the front pages of Chicago's papers—

"At 4:09 A.M., Firebox 2162 on 43rd Street west of Packers Avenue is rung in. Hook and Ladder Six responds. And so does a lot of other equipment before it's over. A million dollar fire at the Nelson Morris plant in the stockyards."

At the four million dollar stockyards fire in 1934 it is told how Truck Six fails to arrive at the fire:

"And how about Hook and Ladder Six? Is she at the blaze? Well, she started out all right, on the fourth special call. But half way in she breaks down completely and has to sit out the fire in somebody else's quarters. After all, this is 1934, and the ancient hayrack is 30 years old."

Then again, the program told how Truck Six now has been retired to a far southside location where fire hazards are not especially great. During the LaSalle Hotel tragedy the rig didn't even leave its quarters. "She has enough trouble just covering her neighborhood without running downtown," the story relates.

The lieutenant of Truck Six, now Truck 42, is interviewed.

"Oh, it works pretty good," he said. "Of course, it gets stuck once in awhile, and we're never sure it's going to go up when we want it to. As for the tractor, it runs. It's all right on the short hauls. But if we have to go over three miles it starts to boil. We make about four trips a month to the shop to get it patched up."

Thus the antiquity of Truck Six, and other Truck Sixes now in service, was demonstrated. At the conclusion of the program Commissioner Corrigan appealed to the listeners to vote their approval of the bond issue.

Handbills Distributed

On the day before election, off-duty firemen distributed small handouts in Loop office buildings, motion picture houses, and in all other places of public gathering.

These slips read, "Dear Neighbor: Your public servants, the Firemen, ask your help in getting much needed fire fighting equipment for maintaining the protection of YOUR lives, YOUR homes, and YOUR business. Support the Fire Department Bond Issue approved by your City Council and endorsed by all leading civic organizations.

"Please VOTE YES ON THE FIRE DEPARTMENT EQUIPMENT BONDS OF 1947 at the polls on November 4th. Your FIRE DEPARTMENT."

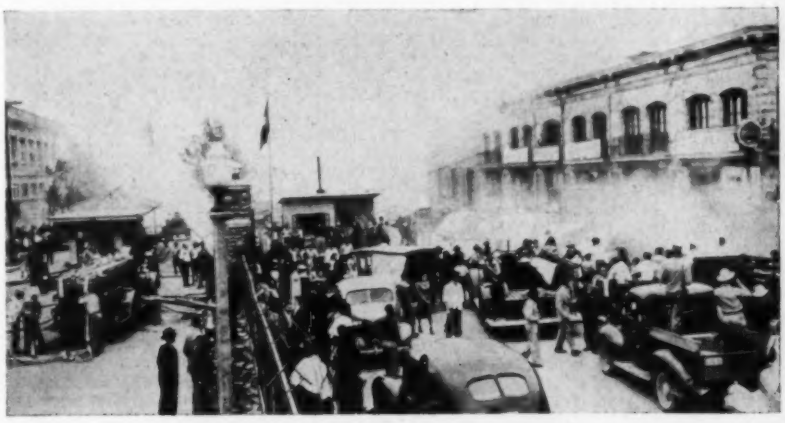
Outlying district firemen also placed the messages in residents' mail boxes. A total of 1,117,000 of these "Dear Neighbor" slips were distributed.

And then the day of the election. The electorate overwhelmingly approved the fire department bond issue. Elation was high among fire department officers and men. Moreover unofficial tabulations showed that the fire department issue exceeded all others by a margin of 4.7 votes to one vote for the other issues on the ballot.

Commissioner Corrigan and Chief Mullaney feel that the hard work of all officers and members of the department was directly responsible for this overwhelming approval by the electorate. The fire department's efforts probably helped carry the other issues on the ballot, according to Commissioner Corrigan.

Two days later Commissioner Corrigan ordered the following message to be transmitted to all fire stations in the city over the department "sounder":

(*Continued on page 324*)



"All Hands"-Across-the-Border Join to Fight Big Blaze

Firemen from Nogales, Ariz. (at left), stand by and ready hose lines to aid Mexican brother firemen as they battle blaze which destroyed liquor warehouse and curio shop in the night club district of Nogales, Mex. Fence in center of picture divides the two nations.

What Status for Fire Service In Event of Another War?

Peacetime and Wartime Effect on the Fire Service; What Can be Done About It?

Editor's note: **The darkening shadow of conflict over a world of unrest and the nation's rush to prepare, not excluding creation of new civilian defense measures, again focus attention on the part the fire service may, or will have to play in the melodrama of World War III.**

It is said on good authority that new civil plans of defense completely ignore the old, tragi-comic OCD program, with its bungling and boondoggling, which in too many instances shelved, or sidetracked, or utterly ignored the fire service. Instead, the plans will call for the emergency services—fire forces in particular—to spearhead the civil defense, along lines and methods that emerged from the crucible of experiences of Britain, Germany and Japan in the last war.

In any extensive program of civil protection, fire safety engineers are going to raise some pointed issues as concerns the fire service, not the least of them being that of the drafting or enlisting of experienced fire fighters into the armed forces, particularly for non-fire control duties. What is to happen to the ex-service men of World War II, who are now part of the backbone of our regular fire defense? Just what is to happen to the fire service when, and if, that backbone is removed, along with perhaps other sinews of the service in the form of trained, young fire fighters?

As yet no one has all the answers. And it is time that we set about finding them. For, if the prophets are right, there will be little time for organizing in the next conflict. The raid on Pearl Harbor may prove to have been child's play compared to the atomic blitz of the next war.

In an effort to stimulate thinking on this and related subjects, FIRE ENGINEERING is glad to bring its readers an abstract of a paper which was delivered before the Spokane meeting of the Pacific Coast Association of Fire Chiefs by Chief Charles N. Carrell of Santa Monica.

The editors are grateful to Chief Carrell and regret that publishing limitations make necessary the abbreviation of his stimulating paper, delivered under the original topical heading of—"Relationship Between Fire Departments and Military Reserve Organizations—Peacetime Effect on Fire Departments—Wartime Effect on Fire Departments—What Fire Departments Can and Should Do About It."

WE in the fire service must recognize as patriotic citizens that we have an obligation toward pursuit of a workable national security policy with regard to fire protection, both from the standpoint of national and of local security. Paralleling this is to recognize also that military reserve recruiting officials have a job to do. They are attempting to do it to the extent of enrolling Naval (and other) veterans up to a million-man strength, including all types of specialists. We do not know, nor do the authorities seem to know, how many fire-fighting reservists, including Army and Marine Corps, will be required as a satisfactory pool. This figure we should like to see definitely established, if possible.

Next, our departments are recognized by military leaders and others as a logical reservoir from which to obtain expert firemen and future training officers. During the last war, men from municipal fire departments made an outstanding record for efficiency in combating military fires. Admiral Pace stated at Long Beach (Cal.) last year (1946), in his speech on the maintenance of discipline, that the finest groups of trained and disciplined men received during the war were the highly trained, efficient and intelligent officers and men from municipal fire departments. Of this we are all aware. Ships were destroyed by fire, however, before the Naval fire-fighting program could be put into effect. We are flattered by these compliments, but we are not guided by what happened during the last war but what may happen, if we are to believe our leaders, in the next.

It is generally agreed that the primary purpose for maintaining reserve organizations to train, keep in touch with and have available for call to active duty, men and officers in the event of national emergency or war. Authorities agree that it is important to maintain adequately trained firemen in order to safeguard the cities of this country against the dangers of catastrophies in any national emergency. Some suggest that there are men, who, because of minor disabilities and age, could be called upon in the event of a national emergency to displace a certain number of trained firemen without seriously endangering the community. They further assert that certain men would volunteer for active duty in the case of an emergency, whose services would be lost to the department and would have to be replaced. On the one hand they say that adequately trained men are essential for home protection, and on the other propose that the adequately trained men be replaced with disabled and elderly men. Moreover, they fail to remember that volunteering for service was prohibited by executive order during the last war. There is little reason to believe that this lesson, once learned, will be forgotten in the next.

Questionable Value of Auxiliary Training

Surely, the military experts of our Army and Navy are aware of the futile results obtained from our attempt to train auxiliary firemen to supplement local fire forces during the last war. Had incendiary bombs been rained on our cities, utter confusion would have prevailed among civilian defense volunteers. The loss would have been irreparable in war time; our industries might well have been paralyzed in spite of the efforts of auxiliary firemen and other civilian defense groups. Many members of these groups demonstrated their inaptitude, particularly in fire fighting. Have our military men not read of the plight of German cities manned with disabled and over-age firemen? The wartime chief of Dusseldorf asserts that fire officials were at a terrific disadvantage to protect their city from loss by fire because they were given such men and not the most active, which should have been assigned. Fire chiefs, responsible for the protection of our cities, cannot sit idly by and see this philosophy cultivated in our own country.

In discussing this problem, it is necessary to point out a condition which existed at the beginning of the last war, and which still exists to a greater degree today. There were many men in the fire service who were also members of some reserve organization. When hostilities began — and even before — these men were the first to be called up, and the last to be released. Replacements, for reasons known to us, could not be recruited and retained. Departure of men from the fire service left many departments crippled. Today this condition still persists. Because of veteran's preference in recruitment, and because they are the only young men in numbers available, thousands of war veterans are being employed in municipal fire departments. Departments which have expanded or replaced personnel since the war may be composed of more than fifty per cent veterans. A large majority of this group are eligible for membership in one or another of the reserve components. Many will join; most of them will take advantage of attractive opportunities for cruises and encampments each year.

What effect is this going to have on fire departments in peacetime?

Assume that ten per cent of a department's personnel become reservists and avail themselves of their legal if not moral right to participate in cruises and other maneuvers; obviously this will work a hardship on most departments,

in that vacation schedules based on seniority will of necessity be disrupted; key personnel may leave at inconvenient times, interfering with administration. This will create a "morale problem" in most department organizations.

From an economical point of view, the local budgetary cost of such a program of civilian military training is an item for consideration. At least one high Naval authority maintains that one reason for the reserve program is to maintain a state of readiness for war under conditions most economical to the national budget. What he is actually saying is that municipalities should undertake to underwrite the budgetary cost of training firemen to be used by the armed forces in time of war in order that saving may be made in the national budget.

Consider the wartime effect on fire departments: A large percentage of reserves in a department, subject to immediate induction should war come, presents an incomprehensible problem. Visualize the sudden department of a minimum of one-third of the fire-fighting personnel of Seattle, Los Angeles or any other large or small city so strategically located as to become a potential target when atom bomb and incendiary warfare is being waged against us. Cities would not only be subjected to fires incidental to such war measures, but also to the normal type of conflagration hazard at a time when full strength would be needed as never before.

Little Time for Mobilization

A leading authority has stated that we will probably have a maximum of but eight hours in which to mobilize when the next war starts. Can our leaders believe that with fire as the leading weapon with which municipal fire departments will have to contend, they can skim off experienced firemen and still have national security?

So little is known (by national and local leaders) about the actual mechanics of operation of organized fire departments! Few realize the complexity of efficient municipal fire department functions; the integration of key personnel; the necessity of a high type of teamwork in fire-fighting operations; the vast and diverse training required to perfect efficiently operating units and that these units must be kept intact, particularly when war threatens, if minimum protection is to be expected.

Many of our military leaders are so steeped in the traditional philosophy of warfare—that of confining the enemy to his own boundaries, that continental and local security are relegated to a secondary position, often neglected or provided for only haphazardly. Naval officers have stated that young officers, graduating from Annapolis, have been well skilled in fire damage control and that the Navy is emphasizing this all-important phase of defense, by putting all personnel through a short period of damage control training when they can be spared from other duties or when their ship is in port long enough. The question is, does such an attitude presume to recognize the national security problem which we are led to believe exists?

The question logically follows, what can, or should, fire departments do about this problem? And in attempting to find the answer the problems of national and local security are so interwoven they should be considered together.

Members of the fire service realize their departments' responsibility in relation to the national security. They also know that in their organizations they have a pool of trained fire fighters which would be of inestimable value to the reserve program, and to the armed forces in time of actual warfare. The fire service does not wish to evade its responsibility in any respect. It is proposed, therefore, that the following actions be considered, in an effort to develop an understanding among all concerned with this problem.

1) Prevail upon the United States military authorities to establish a policy not to accept more than a pre-determined percentage of members of an organized fire department and that enrollment, or applicants for enrollment, above this percentage be rejected. This percentage should be based upon the needs of the reserve groups first, and secondly upon the ability of organized fire departments to release trained fire fighters. This percentage may be determined as from five to ten per cent of the total uniformed fire-fighting force if, in the opinion of the authorities, that number is necessary.

2) Insist that a very large percentage of the fire-fighting reserve established be restricted to enrollment in a fire-fighting reserve unit, in order that annual training will be beneficial to the fire service as well as the armed forces.

3) In the event an agreement is reached on a set percentage of applicants to be enrolled, that the applicants be screened by the fire department, and by the military in order that the most capable and desirable men, from the standpoint of the military authorities, will be accepted.

5) As part of the program, let it be known that any policy or agreement should be subject to immediate revision whenever the military determines that the national security makes such revision necessary and desirable. Agree to abide by such a revision when official notice of it is given.

6) Endeavor to impress upon the authorities that the fire service is more concerned with the welfare of our Nation in general than with any individual fire department in particular. And that the service does not believe either will be properly protected by promiscuous and indiscriminate recruitment of fire department personnel into the military reserve.

7) Establish a liaison in Washington between the fire service and the Department of Defense.

8) Prevail upon authorities to arrange encampments and cruises for the reserve all the year 'round, in order that leaves may be arranged more to the convenience of fire departments.

9) Seek the advice and assistance of other fire protective groups in order that a unified front may be demonstrated to the people and to those who may sponsor our cause in national affairs.

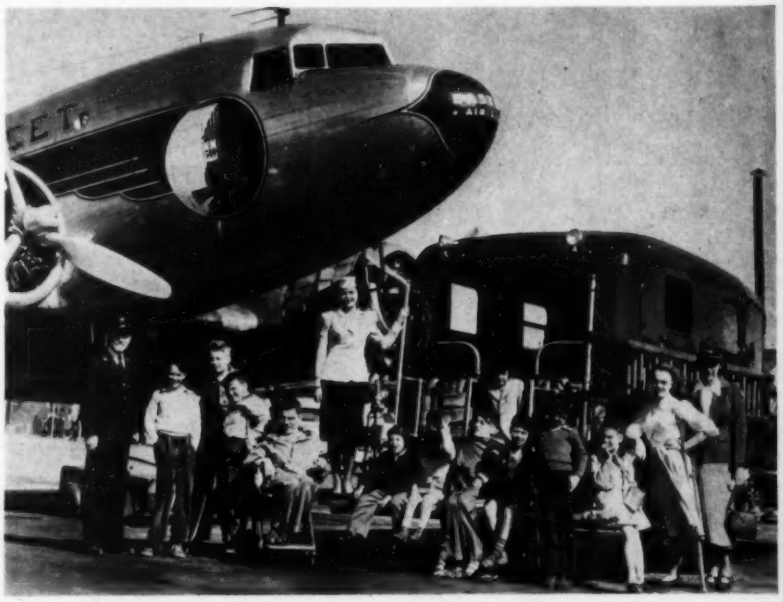
10) Ascertain to what extent reserve recruiting is being pursued in all cities, the point being to see that the load is distributed among fire departments throughout the nation.

11) Determine the advisability of proposing to the government the proposition of underwriting the budgetary cost of training reserve personnel, thus relieving cities of this financial burden.

12) Examine the attitude of military authorities on wartime municipal fire problems and military training needs in an effort to reconcile differences of opinion.

13) Disabuse the belief of many na-

(*Continued on page 325*)



Charlotte Fire Department Gives Cripples an Outing

Children who attend the special school for crippled children, conducted at the Elizabeth school in Charlotte, N. C., had the time of their lives on April 2nd, when members of the Charlotte (N. C.) City Fire Department took them out to the Airport in fire trucks for a 30-minute flight above the city of Charlotte in a big DC-3 airliner of the Eastern Airlines. The photograph shows the youngsters grouped about the Fire Department's big closed truck just before they boarded the plane. At left is H. H. King of the Fire Department. The airline hostess is Miss Theresa Petrillo of Chicago, and at right is Mrs. Grady Blackman of the Red Cross service.—D. G. Spencer.

Chemical Plant Gives Newark Biggest Fire in 25 Years

First 5-Alarm Blaze in That Period Threatens to Develop Into Conflagration; Effective Work Done by Fire Fighters

A STAFF REPORT*

THE first 5-alarm fire in the city of Newark, N. J., during the last quarter century, and characterized by Fire Chief Charles G. Burnett as one of the worst the department has had to fight in that period, occurred on April 10, 1948, at the plant of the Reilly Tar and Chemical Corp., 191 to 251 Doremus Avenue, in the heart of the city's gasoline and oil belt. But for the prompt and effective work of the Newark Fire Department, the blaze would have developed into a conflagration of large proportions.

A Congregation of Hazards

The Reilly Tar & Chemical Corp. plant covers a plot 1150 x 850 feet, comprising over twenty-five acres. Located on this property are more than twenty-five buildings of various sizes, together with eleven open stills, and numerous storage tanks for tar, naphthalene and acids. In addition, there are many large piles of coke in open storage and several wooden enclosed pitch bays, wherein are stored a large quantity of pitch.

The entire plant was built during World War I. The generally prevailing construction is wooden beams for frames, wooden roofs, with space between beams filled in with hollow tile.

*Prepared from data furnished by Chief Charles G. Burnett, Newark Fire Department.

This type of construction is considered low grade in its resistance to fire, and the Newark fire department reports that in practically every fire occurring in such construction over a period of many years, there have been collapse of walls with consequent danger to the operating force.

The principal products of the Reilly plant are acids, roofing pitch, moth balls and flakes, disinfectants and briquette pitch, which is shipped to European countries where it is added to the poorer grades of coal to increase heating efficiency. The naphthalene, from which the moth balls and flakes are manufactured, is one of the products obtained from the distillation of tar. In order to process it for the making of moth balls and flakes, all of the remaining oil must be removed. This is done in a centrifuge, or centrifugal spinning machine. The naphthalene is then run into pans containing about 2,000 gallons each. Here it becomes a solid, following which by various processes, it then is made into balls and flakes. The product is reported to have a boiling point of about 218 deg. F., and reportedly will flash at about 150 deg. F. Naphthalene, before being "whizzed" in the centrifuge to remove the oils that are present, is highly combustible and volatile when heated.

Nineteen 2,000-gallon pans of naphthalene or a total of 38,000 gallons, were located in the building in which the fire first reached proportions. In addition, there were about 60,000 gallons contained in the various tanks located elsewhere in the building. This structure is known as the "Pan Room" and it was fully involved by the fire upon the arrival of the fire department.

The building, and those adjoining, are all one-story, about twenty-five feet in height, with monitors in the roofs. The structures, as will be seen on the accompanying diagram, run about north and south, along Doremus Avenue, and separated from it by the tracks of the Central Railroad of New Jersey. The main body of the plant is about 700 ft. west of the Passaic River.

Directly in front of the fire building, and on the double-track railroad siding, at the time of the outbreak, were two tank cars of 10,000 gallon capacity each. Also, at the time of arrival of the fire department, a tar barge was tied up at the dock. This barge had a capacity of 275,000 gallons of the combustible, and it is said, it had already been unloaded. As the fire assumed threatening proportions, the barge captain signalled a passing tug and had his craft moved to another dock further up-river.

On the west side of Doremus Avenue, running parallel with it, were high tension wires carrying 12,500 and 4,400 volts on wooden poles. Telephone and telegraph lines also were within range of radiated heat given off by the fire. The vacant land between Doremus Avenue and the Passaic River was covered by marsh, or meadow grass. Grass, variously described as "dry" and "oil-soaked," was found at other places on and around the plant property.

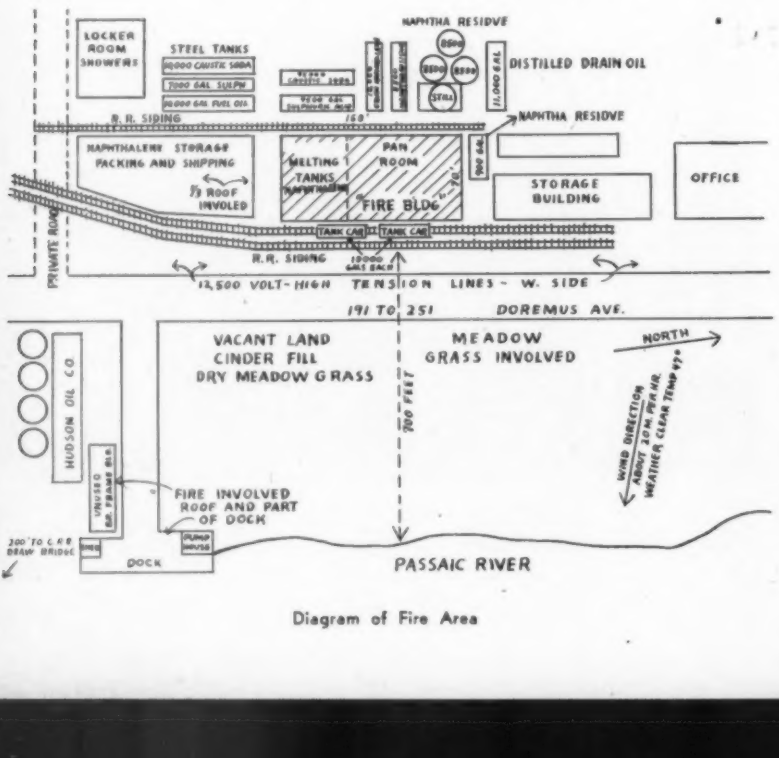


Diagram of Fire Area

Fire Reported to Have Started in Grass

The exact cause of the fire was not immediately determined, but it is said to have originated in the grass adjoining the naphthalene processing building. An employe is reported to have noticed the burning grass, but before he could get help and fight the fire, it had communicated to the plant.

Signal station 4975 (a plant alarm box) was sounded, the fire department receiving the alarm at 3:44 P.M. This brought a response of five engine, two ladder companies, a fireboat, rescue squad and a deputy and battalion chief.

Both these officers observed the extent of the fire before arriving at the scene. While en route, Battalion Chief Frank Hilliard reported by radio that the fire was apparently of large magnitude, and he would report further as quickly as he determined its extent. Almost immediately after this, while still

Photo Courtesy "Newark Evening News"

Part of Destroyed Reilly Tar and Chemical Plant, Newark

Five alarm assignment, including two fireboats, using long hose stretches were needed to prevent threatened conflagration in city's gasoline and chemical area.

about one-half mile from the plant, he radioed a second alarm (3:49 P.M.). Deputy Chief Harry Sommers, who left the scene of a smaller blaze at 1002 Broad Street, and was responding to the Reilly fire from an opposite direction, also made use of his radio to contact headquarters, ordering a third alarm sounded (3:51 P.M.) as he approached the plant from the south, along Doremus Avenue, and received a clear picture of conditions.

According to Chief Sommers, the situation, as he found it on arrival, was precarious. Trainmen from the Central Railroad of New Jersey attempted to stop him at the crossing, about 200 feet south of the Reilly plant; they reported that high tension wires were falling. This he found to be the case when, as he entered the plant gate, several of the wires dropped with resultant loud reports and blinding electrical flashes. His first order consequently, by radio, to his headquarters was to have all power on Doremus Avenue immediately shut down.

Battalion Chief Hilliard, arriving shortly before the Deputy Chief, entered the property by way of the rear gate, off Avenue P. At this time he found all the tanks in the rear of the burning building and the adjoining buildings, seriously endangered. One of his first actions was to order the deck pipe of Engine 8 placed in operation to cover the threatened exposures, utilizing yard hydrants located nearby.

Much to Chief Hilliard's discomfiture, after connecting to these hydrants with 2½-in lines, his men were unable to get but a feeble stream at the nozzle. The plant system is supposed to be supplied by an automatic steam fire pump but for some unknown reason this had not been placed in operation. Nevertheless, there was sufficient water to enable firemen to get a stream of sorts onto the three tanks located to the west of the naphthalene storage building, as shown in the diagram.

Other companies, responding from the west, were likewise handicapped by lack of available water and were compelled to make two engine relays from Avenue P and Allegheny Avenue in order to secure an effective stream.

A quick survey and size-up by Chief Sommers showed that not only was he confronted with a fire of serious proportions in the Reilly Tar plant, but that the fire had already communicated to adjoining property. The dry meadow grass directly opposite the blazing building was afire, and some portions of the Tar dock as well as the roof of the unused building directly opposite the dock, were also involved.

At this point a bit of good fortune developed to support the Chief's judgment. Engine 35, which responded on the first alarm, and which arrived on the scene at the same time as the Deputy Chief, is a crash truck and includes among its other equipment, a 630-gallon water tank. The Acting Captain of this company was directed by the Chief to proceed at once to this involved area and try to check this extension to leeward of the main blaze. Orders were given for Engine 31 (fireboat), also responding on the first alarm, and Engine 33 (fireboat) which was due to respond on the second alarm assignment, to tie up at the dock, if at all possible to maintain that position. This manoeuvre afforded some assurance of protection for the exposures at this critical section of the area.

The naphthalene storage and packing building, adjoining the fire building on the south, was about one-third involved on the roof and fire was entering the north end of the structure from the then fully involved pan room building. It appeared doubtful at this stage if the storage building could be saved. However, by Chief Sommer's direction, the first three available 2½-inch lines supplied by companies responding from the south, were sent into this building and it was soon apparent that they would be successful in preventing further extension of the fire at this point.

At about this time, Acting Chief Engineer John Ruscheck arrived and assumed command. The third alarm companies were arriving, most of them by way of Doremus Avenue from the north, and getting into operation. The high tension power lines had been deenergized and the operating force gradually was able to take up more favorable positions along that thoroughfare. Both fireboats docked and were soon at work. With the assistance of Engines 2, 12, 7 and 35, the fire was prevented from spreading to the Hudson Oil Company and the plant of the Better Finishes Company, adjoining the Hudson property. Employes of the latter company operated company hose lines to help set up a barricade against the fire, and at the same time the Fire Brigade of the Western Electric plant across the River stood by with its apparatus on the alert for flying embers.

Chief Burnett Orders Fourth and Fifth Alarms

Chief Engineer Charles G. Burnett of the Newark Fire Department, who was off duty at the time the Reilly Tar plant

(*Continued on page* 325)

Photo Courtesy "Newark Evening News"

Fire in Newark Naphthalene Plant Well Under Way

Firemen who have responded on multiple alarms getting into action on Doremus Avenue. Note overhead high tension and telephone and telegraph wires.

MODERN COMMUNITY FIREHOUSE EMBODIES UNUSUAL FEATURES

Yoakum, Texas, Station Houses Paid Firemen and Their Families

Editor's note: Surveys made by FIRE ENGINEERING evidence the widespread need for better housing in the fire service. While much emphasis has been placed on the necessity for replacing outmoded and obsolete fire apparatus, little has been said about the urgent need of new fire stations, shops and training facilities, both to replace out-of-date facilities, and to meet the post-war requirements of the fire service.

In the pre-war depression, because of curtailed budgets or for other reasons, fire service construction fell far behind normal requirements. During World War II, materials and labor were not available, and there was practically no new construction. Now, notwithstanding the increasing needs imposed by modernization and rehabilitation programs, re-shifting of fire stations, and other improvements, many communities have again put their fire service building programs in moth balls, pleading high construction costs and other uses for the municipal dollar. Meanwhile, fire service personnel and equipment in many departments, are miserably housed and maintained, with resultant loss in morale and operating efficiency.

It cannot be too strongly emphasized that building conditions, costs, material and labor limitations, etc., are going to be worse before they are better. Right now there is no economy, and less wisdom in postponing vitally needed fire stations, repair and maintenance shops, fire alarm headquarters and training facilities.

Fortunately, not all municipalities are blind to this situation. A large number have already comprehensive construction programs under way. Others are blueprinting new buildings, and still others are re-evaluating their fire department budgets in an effort to finance projected improvements.

A fitting example of an outstanding station, for a small community, is that of the new headquarters of the Yoakum, Texas, fire department described in the following:

YOAKUM is a progressive little city in southeast Texas with a population of slightly over 5,000. Paul F. Gustwick is Mayor; R. B. Quick is City Manager. The Chief of the Fire Department is Elmer Hanna. The city, incidentally, has only three full-time paid men, Chief Hanna and two drivers. The balance of the department is entirely volunteer.

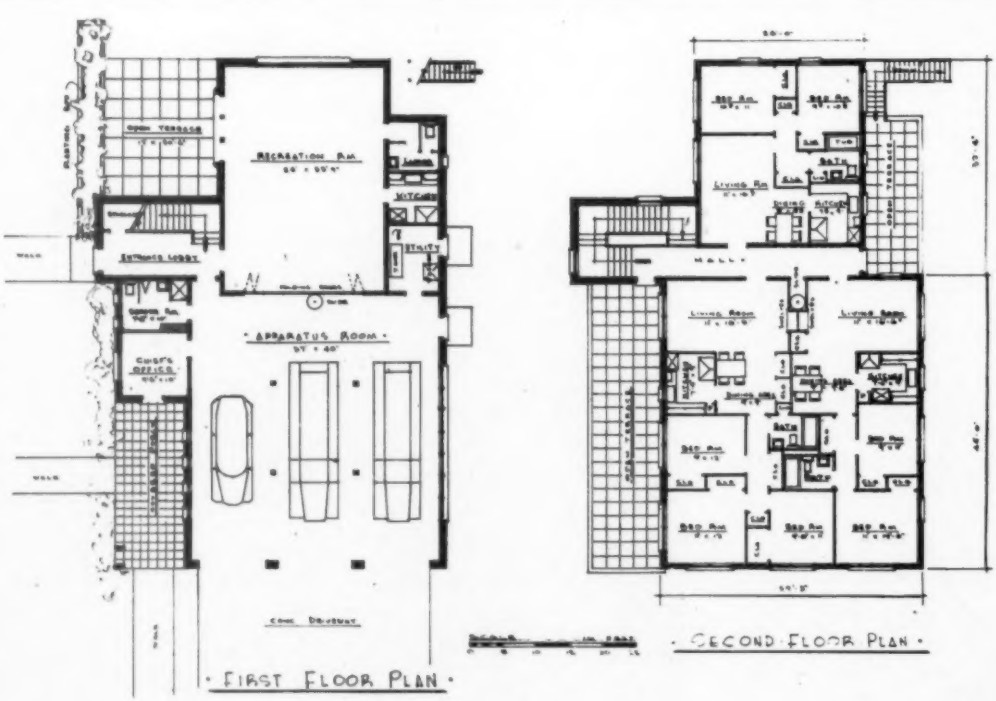
As true in many small communities, the fire department is the hub of much communal activity. And Yoakum civic officials and members of the department recognized that fact, and acted accordingly in running their new station.

In addition to housing the department's fire apparatus, it was early decided that the station should provide an adequate recreation room; next, that accommodations be included for the paid men and their families. The city furnishes to each of the three paid members of their department living quarters, and it is a stipulation that these must be within the building (fire headquarters) as the three are on twenty-four hour duty.

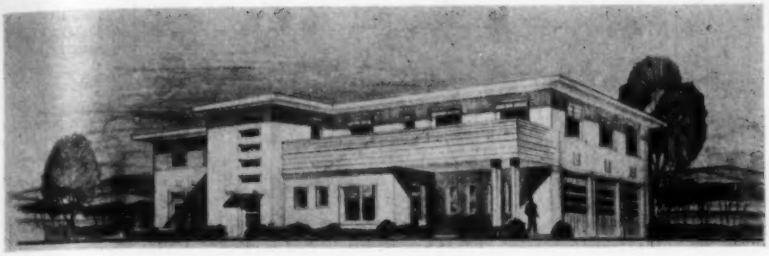
All three Yoakum paid firemen are married and have children. This fact, also, was borne in mind in planning the station. Each family is provided an apartment on the second floor of the building (see floor plan).

For the volunteers and their families (and the public when special civic meetings are desired) special recreational facilities were desired. This presented somewhat of a problem, due to costs. To provide a recreation room sufficiently large to accommodate the maximum number that might congregate at any one time, would mean wasted space and add to the cost. On the other hand, too small a recreation room would not suffice for the volunteers, who, besides holding numerous periodic meetings and parties, have at least one large annual gathering.

In order to give space for the large parties each year, the building was provided with folding doors between the recreation room and the apparatus room.



Floor Plans of New Yoakum, Tex., Fire Station



Proposed Fire Station for City of Yoakum, Tex.

By moving the equipment out of the building onto the driveway approach, the volunteers will have the entire first floor for these special occasions in which the recreation room proper will not handle the crowd.

As is shown by the illustration and diagrams, the building is modernistic in design, but modernism is held well within the bounds of good taste. Because Yoakum is in an area which has comparatively little cold weather, a central heating system is not required. Heating is by vented gas heating units. Gas also provides the hot water.

The first floor layout shows an ample room for three mobile pieces of fire equipment; the recreation room, a so-called Utility Room in which will be located a washing machine for use of the firemen's families; a chief's office and shower room, a kitchen, and ladies retiring room.

In the apparatus room there is a 7-ft. high glazed tile wainscot with smooth face tile above. The concrete ceiling of the apparatus room is left exposed.

In the recreation room there is smooth texture face brick wainscot and walls, with Celotex acoustical ceiling.

In addition to the stairways, there is one sliding pole which pierces the second floor in an alcove off the main hallway, and enters the apparatus room at the extreme rear, between it and the recreation room.

The second floor apartments are laid out to provide ample living and sleeping accommodations, closet space, kitchen and toilet facilities. The partitions of the apartments are solid lath and plaster, but the ceilings are sheetrock with textone finish. The floors of the apartments are mastic tile except that linoleum is used in kitchens, and ceramic tile in bathrooms.

Cost $67,900

The City derived the necessary funds for the new station from the purchase by the City of its own water bonds which had been held in a sinking fund. Plans and specifications were put out for bids, the builder being required to furnish the general construction, plumbing, heating and electrical work, complete.

Bids were received March 30th and it was found that there were only two bidders (a condition encountered in most small towns which are some distance away from the labor and materials market). These bids were only about $1,000 apart and the contract was awarded to the low bidder, at $67,900. Work was begun on April 5th.

The square footage of the ground floor of the new station is 3,165 and the area of the second floor is 2,642 square feet, a total of 5,807 square feet. The approximate square footage cost, therefore, is $11.70.

Plans call for a concrete driveway in front of the three doors, and certain groundscaping around the station.

The architects are Giesecke, Kuehne & Brooks, Austin, Texas.

Exploding Gas Tank Threatens Tolleson, Ariz.

The entire community of Tolleson, Ariz., was threatened with destruction shortly after 2:00 P.M., April 20, when a spark ignited gasoline which had overflowed during operations of filling a 10,000 gallon tank from a trailer truck at the Farmers Oil and Supply Co.

In seconds the truck was ablaze while the burned driver fled for his life. There followed a series of blasts which spread the fire on waves of searing heat. Thirty minutes after the first flash, the top blew off a 10,000 gallon tank and flames shot over 200 feet in the air, the smoke column being visible thirty miles distant. Fire raced east and west from the tanker to Byrne's service station, which was destroyed, then to the Farmers and Sandoval's Grocery to the west. Between the tanks and Grocery were stored twenty-five new hay rakes which were burned. A machine and welding shop and gas station west of Sandoval's store escaped the flames, but three automobiles were consumed.

The first blast smashed windows in a lumber company office directly across the street, but a favorable wind helped keep the flames from extending to the heavily stocked lumber yard behind the offices. This same blast ignited the lawn of the Tolleson Christian Church next to the lumber yard, and burned a woman. Succeeding explosions blew the tops off additional tanks, adding to the volume of fire, which threatened to explode another 10,000 gallon tank. If this had ruptured, it would have meant widespread destruction.

Seven fire companies fought the fierce blaze, while police, aided by a police car equipped with loud speaker, warned the people away from the danger area. Twenty-eight people, twelve of them firemen, suffered burns of varying degree.

Power and telephone lines in the neighborhood were burned down and one member of the Phoenix, Ariz., department was knocked down by contact with high tension wires.

At 4:00 P.M. the second 10,000 gallon tank blew up with a roar, shooting flames skyward and stampeding hundreds of spectators. All six tanks of the Farmers installation, measuring about 12 ft. diameter by 20 ft. high, containing 54,000 gallons of gasoline, kerosene, weed burner and fuel oil, blazed up while panicky residents strove to evacuate their homes and save their valuables. Six hours after the start of the fire, two of the tanks were still burning; one of these loaded with gasoline, threatening to explode momentarily and firemen and spectators were kept at a distance.

The fire was not considered under control until well after dark, and fire companies stood by through the night to prevent re-ignition.

It is reported the tanks were of substandard construction, and that improperly protected electric equipment was employed.

Aerial View of the Fire at Tolleson, Ariz., in Which 28 Persons Were Injured. Several Oil Tanks Blew Up. Much of the Community Was Abandoned by Fearful Residents

FATAL BLAST AT FIRE INVOLVING WASTE ALUMINUM, MAGNESIUM

Insignificant Blaze Causes Violent Explosion; Many Injured in 4-Hour Fight

A Staff Report

ONE fireman was killed, eight others and four policemen were injured, during a series of explosions and fire in a storage shed at the General Electric Company's River Works, in Lynn, Mass., March 20, 1948. The same blast that almost instantly killed the fireman, Samuel J. Naimo of the Lynn Fire Department, badly damaged Engine 3, in operation at the scene.

The actual fire itself, from the property loss standpoint, was trifling. Total damage is estimated by Joseph F. Eckel, manager of the Works, at between $2,500 and $3,000. Fire Chief Joseph E. Scanlon estimated the damage to the pumper at $1,500.

The cause of the explosions was not immediately established, but preliminary investigations attribute them to contact of molten magnesium with water.

According to Chief Scanlon, the first alarm, to which he himself responded, was sounded just prior to 10:00 A.M., when a small fire was discovered in an open storage shed of the plant, a short distance from the Fox Hill Bridge on Western Avenue and a few feet from the Saugus River.

The blaze started in an accumulation of scrap aluminum and magnesium consisting of shavings, turnings and dustings from machine shops in the River Works plant. The company used the shed to store such scrap until it had sufficient carloads to ship to a metal-smelting concern.

Chief Scanlon is reported to have attributed the fire to spontaneous ignition due to the possible presence of oil-soaked waste rags which accidentally became mixed in with the scrap metal. The fire was of minor proportions when first detected.

Municipal firemen had been at the scene more than an hour and apparently had the blaze under control, when the series of explosions began. According to Chief Scanlon, it was nearly 11:15 A.M. when the initial blast occurred and up to that time the fire itself had been "no bigger than an old Christmas tree burning in the street."

General Electric and city firemen had seemingly brought the initial fire under control when suddenly a fresh fire was seen at another end of the building.

Outside Fire Fighting Ordered

Chief Scanlon said that when he first arrived at the scene, upon learning the nature of the magnesium and aluminum scrap stored in the structure, he ordered the blaze fought from outside.

At the beginning, water lines with spray nozzles were used to control the blaze and Chief Scanlon summoned additional equipment to stand by; a second alarm was sounded about a half-hour after the first, at which time Chief Scanlon requested two ambulances of the Police Department to stand by. These were later used to take victims to the hospital.

The worst of the explosions, that at 11:15 A.M., is reported to have hurled 30 firemen and policemen through the air, and showered them with molten metal and burning timbers. Fireman Naimo was attempting to pry the roof of the shed loose, with a long plaster hook, in company with several other firemen. The blast threw him against a tractor in the grounds, and he was struck by falling debris. Fellow firemen were thrown many feet. Two patrolmen who had just arrived, also were hurled a considerable distance and injured.

Many of the less seriously injured were treated at the scene by doctors and nurses from the G.E. dispensary, who set up a first aid station nearby.

The explosions continued with varying intensity during the early afternoon and the fire raged for four hours before it was reported extinguished. As a precautionary measure, all the remaining scrap in the shed was removed by power cranes and transferred to a nearby vacant marshland.

Following the worst of the explosions, Chief Scanlon sent for additional apparatus from Saugus, Swampscott and Revere to stand by. Ambulances from surrounding towns and Red Cross disaster equipment also sped to the scene for use in case they were needed.

Injured firemen were: James O'Neill, 2nd, Engine 6, son of Deputy Chief James O'Neill, face burns and possible fractured knee; Hoseman Robert McGuire, member of the G.E. plant brigade, spinal injury; District Chief Ralph Field, struck by flying timber; Fireman William Downey, Engine 3, burns; Raymond Mansell, Engine 3, lacerations; John Foley, Rescue Company, burns; Charles McIntyre, Rescue Company, bruised; William Hurley and Robert McLaughlin, bruises, and Raymond Doane, G.E. employee, leg injury. Four patrolmen were injured, none seriously.

Report of Works Manager

Investigation into the possible cause of the fire and concurrent explosions was instituted by plant and fire department officials and the State fire marshal's office. In a statement issued by the Works manager, Mr. Eckel, he said:

"A preliminary investigation . . . failed to reveal the origin and nature of the fire in a pile of about 15 tons of scrap aluminum which caused Saturday's unfortunate accident. The investigation also failed to reveal how any magnesium scrap might have become mixed in the pile of aluminum which had been collected in an open shed. Disposal of magnesium scrap is accomplished under a strict plant protection policy which has been in effect ever since the metal was first used at the River Works. Magnesium is used in the manufacture of certain products and all scrap from this metal is collected daily in barrels painted a bright red and bearing the words 'magnesium' in large white letters. The barrels are then placed in a steel shed under lock and periodically removed to a dump in a safe area where the magnesium scrap is destroyed by burning under close supervision. Only a few barrels of the scrap are allowed to collect at any one time before destroying.

"The Works policy governing the disposal of magnesium scrap strictly forbids mixing magnesium scrap with the scrap of other metals . . . elaborate steps are taken to prevent the accidental mixing of magnesium scrap with scrap of other metals. These steps are necessary because it is almost impossible to tell the difference between aluminum and magnesium scrap.

"The works has been selling scrap aluminum for a number of years, and there never has been a complaint from the purchaser that it contained magnesium. We believe this indicates all parties responsible for the collection and disposal of magnesium scrap have carefully observed our safety and plant protection policies. Since the aluminum scrap is melted down, it would seem that the presence of any magnesium would have been quickly noticed in prior collections. The investigation will be continued. . . ."

This fire offers further evidence of the explosive quality of molten magnesium when in contact with water. The dangers of this light metal from fire, especially when in powdered or shredded form, have been sounded repeatedly to the fire service through this journal, the National Board of Fire Underwriters and others. Since 1943 a number of tests have been conducted by the National Board and the International Association of Fire Chiefs to determine the hazards of magnesium under varying conditions of production, handling and storage, and the most efficient and safe extinguishing procedures. Some of these findings have been published by the National Board and the I.A.F.C. We quote from one, the "Report of Tests on Control of Large Magnesium Fires" (issued in December, 1944):

"When magnesium in its solid forms is ignited it melts as it burns, and after some minutes of burning produces puddles of molten magnesium, which present the fire and explosion hazards associated with other hot molten metals, increased by magnesium's greater affinity for oxygen.

"When a sizeable amount of molten magnesium is brought in contact with a mass of water or vice versa, an explosion results. In using hose streams in fighting building fires where magnesium in solid form is involved, such contact between molten magnesium and water may be possible, and if occurring, the resulting explosion may be severe.

"Such explosions may be avoided to the extent that it may be possible to keep molten magnesium from forming sizeable puddles, or to the extent that it may be possible to keep masses of water and of molten magnesium from coming in contact. Available data indicate that under automatic sprinkler protection the amount of molten magnesium formed will be much reduced, and the

(Continued on page 327)

Boston Regulates Use of Flammable Decorations

The Boston Fire Department, through its Fire Prevention Division, has published a document covering the "Terms and Conditions Promulgated by the Head of the Fire Department Governing the Use of Inflammable Decorations in Public Buildings, Places of Assembly and in Stores."

The terms and conditions establish authority in the fire department to regulate the use of fabrics, plastic coated fabrics, unbacked plastic sheeting, artificial leather of any type, lacquered leather, or "other decorative material for decorations in public buildings, places of assembly, and in stores within the City of Boston, until a sample thereof has been submitted, tested and approved in accordance with the Boston Fire Department's Terms and Conditions applicable to the use of inflammable decorations."

The document sets forth the purposes of the tests, method of sampling, test apparatus and procedure and stipulates the conditions under which a certificate of analysis and letter of approval will be issued on completion of the tests. In addition to the certificate of analysis (report of laboratory tests), a certificate of flameproofing is required where a flameproofing process, not of permanent nature, is applied to decorative material to be used in any public building, place of assembly or store. This establishes a time limit for the use of such material, after approval, and designates the conditions under which the flameproofing process shall be reapplied, and the certificate renewed.

Failure to comply with the terms and conditions set forth is punishable by a fine of ten dollars for each day during which such violations continue after notice. The head of the fire department may also order the removal from any public building, place of assembly or store, of any flammable decoration used or installed therein in violation of the terms and conditions.

The measure gives new authority to the department and its Fire Prevention Division, headed by Deputy Chief in Charge, Edward N. Montgomery.

Bridgeport Has Four Multiple Alarm Fires

Damage was estimated at $200,000, and two firemen were injured following a spectacular two-alarm fire that completely destroyed the Congress High School at Bridgeport, Conn., on January 7. Firefighter Stanley Roman of Truck 5, and Pumper Engineer Harry Lill of Engine 12, were treated for injuries at St. Vincent's Hospital.

Firefighter Roman was struck on the shoulder by a charged hoze nozzle and Pumper Engineer Lill was struck on the head by falling bricks.

The fire was first discovered by a resident of the neighborhood who telephoned to Fire Headquarters. Responding on a still alarm, Acting Lieut. Ellwyn Callahan of Squad radioed headquarters to send out a box alarm.

When Asst. Chief John P. May arrived on the box alarm he immediately ordered a second alarm sounded from Box 329, Washington Avenue and Lyon Terrace, opposite the school. Fire Chief Martin J. Hayden, in command of the fire, ordered additional companies when he arrived on the second alarm.

Erected in 1881, the three-story brick structure was the first to be constructed by the City of Bridgeport for high school purposes and was known originally as Bridgeport High School. Located on Congress Street, adjoining Central High School, a modern structure, it had a current enrollment of 487 pupils.

Battling a blaze visible in the surrounding towns of Stratford, Fairfield and Long Hill after its discovery at 3:28 A.M., firemen required more than four hours to bring the flames under control. The fire is believed by fire officials to have started in a rubbish barrel used for sweepings after evening classes are held in the school. The school is partially covered by insurance.

The first alarm was received at 3:28 A.M. The second alarm was sounded at 3:29 A.M. and the recall was sent in at 7:53 A.M. Seven companies fought the fire.

On January 10, four days after the Congress High School blaze, the Bridgeport Fire Department was again called to fight a two-alarm fire which leveled the Serv-All Garage at 68 DeKalb Avenue, in that city. An auto body repair and paint shop, the building was engulfed in flames when firemen arrived at the scene.

Seven automobiles were destroyed in this fire and three near-by houses damaged by sparks. Eight families were driven from their homes when smoke from the blaze filled the neighborhood. Extreme cold weather hampered the operations of firemen in their work. The fire is believed to have started by a short circuit in the electrical wiring of one of the autos in the garage.

The first alarm was received at 10:45 P.M., from Box 518, Newfield Avenue and Seaview Avenue. The second alarm was sounded by Asst. Chief George A.

Decerbo Photo

Smoke, as Seen from Several Blocks Away, Billows from the Lyon Body Service on William Street, Bridgeport, Conn., which Was Swept by a Two-Alarm Blaze on January 28.

Congress High School Fire, Bridgeport, Conn., at Its Height

Butler at 10:54 P.M. Recall was at 11:33 P.M.

Following a two-alarm fire on January 19, which gutted the three-story brick building occupied by the New England Tobacco Company on East Main Street, causing damage estimated at $125,000, Bridgeport was confronted with its fourth double alarm blaze on January 28 when fire, feeding on gasoline, paint, lacquer and other inflammable materials, swept the interior of the Lyon Body Service on Knowlton Street, and destroyed nine automobiles in the two-story frame structure.

Thick smoke billowed high over the East Side district of the city. Sections of the building's roof and second story flooring caved in as flames raced up the walls and licked from windows and doors. Igniting of gasoline or gasoline fumes by an acetylene torch was given as the cause of the fire. Damage was estimated at $30,000.

The first alarm was received at 9:14 A.M., from Box 417, Knowlton Street, between East Washington and Crescent Avenues. A second alarm was radioed by Fire Chief Martin J. Hayden at 9:20 A.M. Five engine companies, two truck companies, and two Squad companies fought the fire. Recall was sounded at 10:15 A.M.

TOM MAGNER

Betterments in Boston

Progress is recorded in rehabilitating the Boston Fire Department which, in 1946, was forced to rely on apparatus ranging from four to thirty years in age, 95 per cent of the equipment being over twelve years old; 60 per cent over fifteen years of age and some pumping engines over twenty-five years ancient. It is reported that Deputy Chief Walter Glynn, Superintendent of Maintenance, and his shop men have kept rolling stock in service only by most strenuous day-and-night operations. At one time in March, 1947, fifteen pumps were broken down but despite this and other layups due to accidents or failures, not a single company was put out of service.

New apparatus is being installed as rapidly as the rehabilitation program inaugurated by Fire Commissioner Codman can be effectuated. These companies have received new pumpers: Engines 1, 2, 3, 4, 7, 10, 14, 17, 22, 24c, 25, 26, 30, 32, 33, 36, 37, 39, 40, 41, 46, 49, 54; Hose wagons: Engines 4, 7, 10, 13, 33, 25, 22, 26. New rescue trucks have been given three companies. Water Tower 2 has been rebuilt and fitted with new tractor. Three new companies have been organized: Lighting units 1, 2 and 3, will respond to all night fires and on special call at any time.

Engine 54 was organized at Long Island and Ladder 33 was inaugurated at the same time. Ladder 32 was organized in District 15. Now, all boxes in the City normally have response of not less than two ladders. In Boston, all hospital boxes bring three ladders on the first alarm.

Two new Diesel-motored fireboats have been purchased and one installed at Engine 31. The fuel bill for the first month's operation of one new boat is reported as $54.00 whereas Engine 44 (oil-burning fireboat) had a fuel bill for $1,400 for the same period.

Firemen now work 48-hours and over 400 new men have been trained.

In February, 1948, orders for new apparatus (for which deliveries are to start this spring) included: twenty pumping engines; ten 85-ft. aerial ladders and six junior aerials; a tractor for Water Tower 1 and twelve hose wagons.

Interest is centered in two new high pressure hose wagons of Engines 25 and 26 which are unique in design and construction. Each piece has two 1800 GPM guns and one portable gun.

Boston is said to be the only city in the United States that operates two-piece engine companies throughout the department. BEN ELLIS

Radio Fire Communications Recorded at Columbus

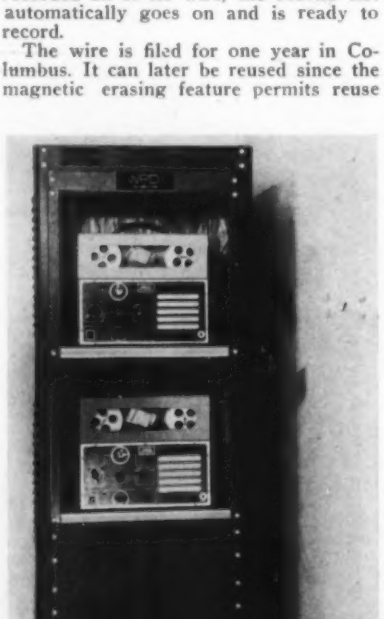
Further progress in fire and police radio communications is indicated by the successful application of wire recording to the operation of fire and police radio station WPDI in Columbus, Ohio.

James Harkins, Columbus Superintendent of Police and Fire Communications and his staff, along with Mr. L. C. Murphy, representing the Peirce Wire Recorder Corp., developed a dual recording system employing two Peirce wire recorders. The two machines record all incoming and outgoing calls over station WPDI.

The machine is ready to record as soon as a voice energizes the movement of the wire. One two-hour spool of wire lasts 24 hours, according to tests made in Columbus. When one machine has recorded all of its wire, the second one automatically goes on and is ready to record.

The wire is filed for one year in Columbus. It can later be reused since the magnetic erasing feature permits reuse of the same wire indefinitely without any deterioration. It can be transcribed if necessary, or can be stored. It can be replayed at any time.

Since the Federal Communications Commission requires complete logging of time on the air, many police and fire radio stations are expected to plan similar installations. Those participating in the Columbus project in addition to Harkins and Murphy are Robert Swepson, chief technician of fire and police communications and George Brannon, assistant chief technician.



Two Wire Recorders Provide Columbus, Ohio, Fire and Police Radio Station, WPDI, with a Complete 24-Hour Record-on-Wire of All Incoming and Outgoing Calls.

Paid Men and Volunteers Quell Apartment Fire

Three fire companies of the Philadelphia, Pa., Fire Department, under command of Deputy Chief John McLaughlin, crossed the border into Upper Darby Township, Delaware County, just west of the Quaker City's border, to join with the volunteer departments of Upper Darby, Yeadon, Lansdowne, E. Lansdowne, Highland Park, Cardington-Stonehurst, Garretford-Drexel Hill and Millbourne in controlling a threatening fire in the 4-story Stonehurst Apartments at Garret and Copley roads, in the heart of the Upper Darby business district.

The fire started about midnight, January 31, 1948, with the temperature at 10 degrees above zero and is believed to have originated in the basement of a ground floor drug store. It was first noticed by the proprietor, Walter Yardcusky, who, with his 19-year-old son unsuccessfully fought it with hand extinguishers until firemen arrived.

The brick apartment building housed 82 families located over a series of stores on the first floor, several of which suffered fire and water damage. Fifty-nine families were made homeless, although almost all occupants of the building were forced from the burning structure into the frigid streets.

First-arriving firemen quickly called for assistance from neighboring communities of suburban Philadelphia and from the Philadelphia Fire Department. In the early stages of the fire, firemen carried three persons down a 65-foot aerial ladder, and helped escort eleven others from the smoke filled upper floor.

Only one resident of the apartment and three volunteer firemen were injured seriously enough to require hospitalization. Many firemen, however, suffered from smoke inhalation, and exposure to the biting cold. They were treated on the fire ground by ambulances of Upper Darby, Yeadon, Lansdowne and East Lansdowne.

The fire was brought under control by 1:00 a.m. February 1 but Philadelphia firemen remained at the scene until 5:00 a.m. and Highland Park, Cardington - Stonehurst, Garretford-Drexel Hill and Millbourne forces maintained vigil until 10:00 a.m.

Losses were not immediately determined but damage to the drug store alone was estimated at $100,000. During the 10-hour struggle, firemen were served hot coffee and sandwiches by the kitchen trucks of the Second Alarmers Association from Chester, Philadelphia and Willow Grove. The homeless were found quarters by the Red Cross. APPRECIATION TO CORRESPONDENT FRANK LORD

Illinois Fire Prevention Conference Committee and Group of Participants

Seated, left to right, John H. Craig, state fire marshal; Richard E. Vernor, conference chairman; Vernon L. Nickell, state superintendent of public instruction; T. P. Sullivan, director state department of public safety; Governor Dwight H. Green; W. Walter Williams, Seattle, Wash., chairman of committee on organized public support, President's Conference on Fire Prevention; Alvin S. Keys, assistant director, state department of public safety.

Standing, left to right, C. W. Soderstrom, manager, Illinois Inspection Bureau; Russell Sprouse, president, Illinois Association of Insurance Agents; Simon Kellermann, Jr., Edwardsville, representing Chief Russell Wright, president of the Illinois Firemen's Association; Mrs. Frank Dowd, Winnetka, representing Mrs. Frank A. Damm, president of the Illinois Congress of Parents and Teachers; Mrs. Howard Henderson, Litchfield, representing Mrs. E. E. Byerrum, president of Illinois Federation of Women's Clubs; Herbert A. Elkin, secretary, Illinois Fire Prevention Association; Rev. John H. Hauser, rector of Christ church, Springfield, who delivered the invocation; Anthony J. Mullaney, chief fire marshal of Chicago; Frank C. McAuliffe, president, International Association of Fire Chiefs and chief of the Chicago Fire Insurance Patrol; T. P. Brooks, state liaison officer, American Red Cross.

Navy Introduces Hazard Remover

Considerable publicity has recently been given another development by the Navy in the field of fire prevention and fire protection. This is a method for removing oil slick and slime from surface water.

A serious problem in any busy port is the presence of oil and oily liquids floating on the surface of the water. In dock areas where it collects around vessels and piers this oily waste constitutes a serious fire hazard. Serious fires have been known to occur where such oil slicks have become ignited and communicated to vessels or the substructures of piers and wharves. The accumulation of these flammable lighter-than-water liquids presents a special hazard where they may come in contact with wood piers, particularly those constructed of creosoted lumber and pilings.

This hazard is so great that in the presence of such oil slicks, welding operations must be discontinued until the slick is removed. Skimming the slicks off, emulsifying them by agitation or forcing them away from docks with hose streams are all costly, time-taking and inadequate methods.

Navy technicians, long concerned with the oil-pollution problem, have discovered that sand, roasted with asphalt and oil mixture, combines with slicks to form a heavy semi-solid. Agitation, such as when a slick is sprayed with this sand, promptly causes the compound to sink, removing the hazard. By using this method, pilings, spaces under piers and between pier and ships, inaccessible by other methods, can be cleaned of oil sludge and slick.

According to information released by the Office of Information, Navy Department, the treated sand is blown onto the oil-covered water through a hose connected to a tank of high-pressure air. A special flat nozzle is used to diffuse the sand over the surface of the oil slick. The pressure must not be too great or the sand will be driven through the slick and will sink to the bottom without picking up a maximum coating of oil.

The equipment for using the application is reported to be comparatively light and easy to handle, and well adapted for use in out-of-the-way places such as in the narrow confines between the surface of the water and underside of a dock.

Thus far the system is not yet reported commercially available.

Special Flat Nozzle Is Used to Blow the Treated Sand Over the Surface of an Oil Slick. Pressure Must Not Be Too Great or the Sand Will Be Driven Through the Slick and Will Sink to the Bottom Without Absorbing a Maximum Coating of Oil

Railroad Trip Planned for Eastern Conference

New Jersey fire chiefs are arranging a special railroad trip to the coming meeting of the Eastern Association of Fire Chiefs, to be held at Jamestown, N. Y., June 17-19, 1948.

The party will leave Jersey City on the Erie Railroad, the only railroad giving direct service from that city to Jamestown.

The trip is being planned under the direction of Chief of Patrols James T. Keegan, 147 Oakland Terrace, Newark, N. J.

Firemen's Stamp Approved

. It is reported (April 6) by Washington correspondent, Irving Wallen Johnson, that the House of Representatives passed Joint Resolution 339, offered by Congressman Boggs, to provide for the issuance of a special postage stamp in honor of volunteer firemen.

Iowa Fire Losses

Iowa's 4,032 fires during 1947 caused 118 deaths and $6,297,073 property damage, according to State Fire Marshal John W. Strohm's annual report.

Two Dwelling Fires Take Seven Lives

At Mount Pleasant, Pa., a mother and four children, ranging from three months to five years old, burned to death when fire destroyed the Antonette Building.

The building contained a tavern, storeroom and market, and eight apartments housing twenty-nine tenants, including Mrs. Sarah Crosby, 37, and her four children, all girls.

The fire, of undetermined origin, is believed to have originated in the top floor; it was discovered at 10:00 A.M. and was fought by Norvelt and Mount Pleasant Township No. 1 volunteers, aiding the Mount Pleasant Volunteer Fire Department. It had a good start before detection and was not noticed by men in the downstairs tavern until the windows on the third floor blew out. All the victims were found on the third floor, where they had been trapped, about an hour later after the fire had been controlled. All the other twenty-four occupants of the building safely escaped from the 50-year old structure and it is believed the Crosby family might have been saved had anyone known they were in the burning building.

At Minneapolis, Minn., two men, aged 66 and 70, died, one fireman was injured and four persons were rescued in a fire which raced through a frame boarding house on Jan. 16, 1948.

The fire was discovered shortly before noon by a next door neighbor who sounded an alarm, then assisted two elderly women, one an invalid, from the burning structure. Two other elderly women, one the owner, also escaped. Firemen said the two victims died in their beds, one on the first, and one on the second floor. They found flames involving part of the front porch and side windows upon their arrival, with the lower part of the house heavily involved.

Photo Courtesy Mount Pleasant Fire Dept.

A Mother and Her Four Children Died in This Fire at Mount Pleasant, Pa. At the Time This Picture Was Taken, It Was Not Known That the Victims Had Been Trapped in Their Apartment on the Top Floor of the Burning Building

A Flash Fire, Which Started from an Overheated Furnace, Killed Two Persons and Injured Another in This Frame Boarding House at Minneapolis, Minn.

Fire Chief Is Building Inspector

Kingston, Pa., fast-growing borough of 26,000 persons near Wilkes-Barre, has created for the first time in Pennsylvania the positon of fire chief-building inspector.

The combination position, in effect, gives the borough its first full-time salaried fire chief. Previously the fire chief was on a call basis.

Named to the new post was Lee Weir, a prominent figure in Northeastern Pennsylvania firemanic circles, and a veteran of 40 years service as a fire fighter.

Chief Weir was named to the post on the day he observed his 40th anniversary as a member of Kingston Fire Department. He served as a call man from 1908 until 1922 when he was appointed to the uniformed force. Prior to becoming chief, he served all of his paid career as chauffeur-engineer of Company 2.

Before his appointment to the paid force, Chief Weir was employed in the construction business, and it was this training, plus his years of fire fighting service, that lead to his selection for the new combined post.

As chief, he succeeds his later brother, Chief Harry Weir.

The department has a uniformed force of nine men, who man two engine companies and one city service truck company. In addition, there is a call force of 50 men who are summoned by audible alarm.

SHELDON C. WINTERMUTE.

Radio in Endicott, N. Y.

Chief Edw. J. Hart of the Endicott, N. Y., Fire Department, comments on the editorial in the February, 1948, issue of FIRE ENGINEERING, about improving fire service efficiency.

During the year 1947, says Chief Hart, his department installed one control unit at Central Fire Headquarters and five frequency modulation two-way Link radios in the chief's car, squad, and Engines 1, 2 and 3.

These new units replace the old amplitude modulation sets purchased in 1942. The chief claims that the advantage of FM over old AM is that with the FM there is less static and interference, better coverage, higher quality and lower battery drain.

The new FM two-way radio-equipped apparatus permits the department's operators to immediately assign companies which may be working at one fire, to other fires, and be in touch with headquarters at all times.

The Endicott Fire Department received and transmitted through the police radio (without any interference) 1,382 calls. This year (1948) the number of calls will increase, due to the added equipment. The department also has a two-way inter-station communications system from its three fire stations, giving the department a four-way coverage; telephone, radio, inter-comm' and Gamewell fire alarm system. In addition to the fire department mobile units, one ambulance and three prowl cars of the Police Department are radio-equipped.

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Radio Ripley Alarm Transmitted 1,200 Miles

Believe it or not, a fire alarm was transmitted more than 1,200 miles by radio and telephone.

When a serious fire broke out in the early morning, in the little village of Shediak, New Brunswick, cutting off all wire communication with the outside, Eugene Fougere, an amateur radio operator, sent out a frantic appeal to any other amateur who might intercept his message, to summon aid from the City of Moncton, located 20 miles away.

The message was picked up by another "ham" operator, Philip Sherman, in Bellingham, Mass., more than 600 miles away. Realizing that there would be very few other "hams" on the air at six o'clock in the morning (the time of the broadcast) Mr. Sherman, who when not "hamming" runs a garage in Milford, immediately put in a long distance phone call to the Moncton-New Brunswick Fire Department, giving it the information that he had picked up. The Moncton department in turn dispatched apparatus to Shediak and brought the fire under control. (Thanks, Henry T. Hanson.)

* * *

And in the Sleepy City, Too!

From Philadelphia, Pa., where the motto is "take it easy," comes disturbing news for snoozer-firemen. There will be no more "beddy-bye" between fires for the Brothers in the City of Brotherly love! Removal of all beds from the city's 156 fire houses was ordered March 18 by Director of Public Safety James H. Malone.

The beds have been in use since the days of the two-platoon system. Then, firemen who worked longer hours, slept at the fire houses when not on active duty. The three-platoon system was instituted last year and now the beds have gone bye-bye.

* * *

Hot Off the Tape

In Pomeroy, Ohio, Mayor D. A. Canaday found a fire hazard. It was the Third Ward firehouse. He ordered extensive repairs, cleaning and the installation of safety devices (we might add—finding a firehouse that's a fire hazard is nothing original!—what's news, is finding a mayor who will do something about it!) . . . In Estherville, Ia., Wendell Weber was fined $5 and costs of $3.35 for following the fire trucks and obstructing firemen's work at a fire, Congratulations to the magistrate, and Mayor W. R. Sidles. . . . When the West Glens Falls, N. Y., Fire Company learned that its representative, whom they'd sent to New York to obtain a War Assets Administration fire truck, had returned ready to report his findings—or lack of them—firemen of the area were summoned to the fire house by repeated blasts on the air raid siren, which has been doing duty as a fire alarm signal. Nothing much came out of the "indignation" meeting except complaints from townsfolk who wanted to know where the fire was. . . . If you think your luck is bad because you can't find a home, think of Hap Wallace and his family. Hap and entourage had just moved to Belleflower, Ill., from Farmer City to take a house that was precisely "what the doctor ordered." Before they had finished the unpacking job, the place caught fire and burned down. . . . In the closing program of the Community Institute, in Mamaroneck Junior High School, Mamaroneck, N. Y., the speaker was holding forth on the importance of discipline, and the need of setting high standards for children, when the presiding officer interrupted the proceedings to call attention to the fact that smoking was not permitted in the auditorium, and to ask the elders in the audience to kindly desist, as per regulations. . . . In Knoxville, Tenn., Fire Chief C. M. Johnson has banned all card playing in city fire houses because of recent arguments among firemen over their games. The same action was taken in 1903, but the ban was lifted in 1912 when firemen promised to keep their games "quiet and out of sight of the public." . . . Organizations of 4-H Clubs in Minneapolis have been formed to help check farm fire losses. . . . A Bayonne, N. J., fire captain and 35 women enrolled as students of a home nursing class. What's more, classes will be held in the firehouse. . . . Prompted by a recent case in which a verdict of $64,000 was awarded to parents of a child burned to death while wearing flammable costume clothing, Senator Frederick E. Hammer, Queens, N. Y., Republican, introduced a bill in the State Legislature to require manufacturers of toys, novelties and costume clothing for children to plainly label all combustible materials used in such articles. . . . Safety Director John B. Keenan of Newark, N. J., has ordered an ordinance for his city which will prohibit automobile drivers from using the radio telephone in Newark while the automobile is in motion. He contends that while the car is in motion and the operator is using the radio telephone, it diverts his attention from proper driving and creates a potential hazard on the highways of the city.

* * *

Montreal's Cowboy Firemen!

This 'un might be set to music with some such euphonious caption as Rovin' Firemen Run and Rope on Runway 24", or the like. At any rate the yarn, which comes from contrib N. R. Wypruk, member of the Montreal (Que.), Fire Department goes as follows:

"While eating a delicious warm supper, three Montreal Airport Fire men were hustled out of their snug quarters by the Control Tower to "clear obstructions."

The Brothers (to you Montreal fire fighters, that's an affectionate term for fellow-firemen) responded promptly and on arrival at the "scene" found seven cows roaming and running around the runway with consequent hazard to aircraft coming in for a landing.

Forty-five minutes were spent by the intrepid "airport cow punchers" "running, roaping and cussin'" to complete the roundup of the bossy cows. Says one of the "rangers": "Although we couldn't bring back a cow to the fire house (for steak), we sure did enjoy the cold—supper that was waitin' for us—cold soup, beef and spinach, too!"

* * *

Meatball Is a Mama!

Recently a Washington, D. C., newspaper published a picture story about the Glen Echo, Md., Fire Department which rather prominently glamorized a cat named "Meatball." It was mentioned, in passing, that Meatball was "expecting."

The Glen Echo boys, and "Meatball," were the recipients of a spring freshet of gifts as a result of the publicity. The "glamour gal pet" of Chief Joseph Giammatteo's organization of blazebeaters found the limelight a bit distracting, 'tis said, and one fine day she disappeared. Whereat the vamps were in a fine state of dithers, if the gossips are correct.

All turned out serenely, however, when the vol's were called to respond to an alarm for a brush fire in their district. When the tarp' used to cover hose in one of the trucks was dislodged, lo and behold—there was "Meatball"— and three little "Meatballs"!

The proud fire fighters took another truck to the fire, leaving mama and her progeny snug in her double jacketed, rubberlined 'nest.' (Thanks, Irving Johnson.)

* * *

The "Ripley" of the Year?

A freak bolt of "lightning," apparently set off by a dynamite blast on U. S. Highway 99 April 8, 1948, critically burned Odis A. Pascoe, 40-year-old workman.

According to deputy sheriffs, Pascoe was putting five sticks of dynamite into position for blasting on a stretch of the highway known as "five-mile grade," at a point where Edison Co. "high" lines pass over the road.

Static electricity, deputies said, apparently was picked up by the wires leading to the dynamite, setting it off prematurely. But Pascoe was not hurt by the blast according to the deputies. They reported the blast stirred up a cloud of dust apparently of high metallic content which provided a path for a bolt of "lightning," from the overhead high tension wire to the ground.

Pascoe was burned from head to foot, taken to Newhall Community Hospital, where his conditon was listed as "extremely critical." (Thanks Captain H. W. Crutchfield Engine 22, L. A. County Fire Dept.)

* * *

Trivial Alarm Causes Death of Fireman

Listed as an "unnecessary alarm"—a scorched dinner sent several firemen, members of Engine 89, New York Fire Department, the Bronx, to Fordham Hospital, when their pumper overturned at E. Tremont and Barkley Aves., as it swerved to avoid collision with a private auto.

Fireman First Grade John T. Ryan, 40, died the following day. Fellow-firemen Lieutenant James Howthorne and Anthony Vargona, who were riding the rig at the time of the accident, were reported not seriously injured.

Short Cuts and Gadgets

TRAVELING ALARM SYSTEM

The installation of two-way radio in the vehicles of taxicab companies, public utilities, bus and railroad companies is providing the fire service with a lot of mobile fire alarm signal stations.

An example of this application of mobile radio communications to the business of fire fighting is provided by Contributor Jonas Welcome of the Springfield, Vt., Fire Department. Although not strictly a "gadget" it nevertheless comes within the "Short-Cut" category.

According to Brother Welcome, the Springfield Fire Department was called to a fire in a 1941 Ford pickup truck owned by the Central Vermont Public Service Company, Cavendish, Vt.

The pickup truck had a two-way radio installation, which the employes found very useful. Upon discovery of the fire, they immediately radioed notification of the fire to their company headquarters, eighteen miles away. The Company, thereupon, in turn, called the Springfield Fire Department by telephone and the firemen were on their way in no time. Little damage was done to the truck as the fire was out when the Brothers arrived. Nevertheless, had the fire been of more serious proportions, this quick notification would doubtless have helped minimize the loss.

* * *

PORTABLE HOSE RACK

One of the firehouse problems to which nimble wits of the service have given much attention is the storage of hose. As our readers may recollect, "Short Cuts and Gadgets" has told about several such devices for handling, stowing and loading hose. Now comes still another, which possesses interesting features.

This is known as the Bow-Mack hose and loading rack and it was the brain child of Fire Chief G. R. McAlpine and was built by the Oklahoma Fire Department's Shops. It was exhibited at the Southeastern Association of Fire Chiefs Convention and we understand that the unit is to be shown at the forthcoming I.A.F.C. Convention in Miami, next summer.

According to Chief McAlpine, the gadget has ten features. It carries 1500 feet of hose and is portable; it eliminates dragging hose on the floor; requires less space for hose storage; eliminates possible damage from acids, and damage to couplings while loading; it requires less space for loading, and two men can efficiently load from it; it eliminates damage by rodents or insects while stored; it provides an orderly method of storage for hose and it affords quick and efficient reloading.

* * *

NEW TWIST TO THE DONUT ROLL

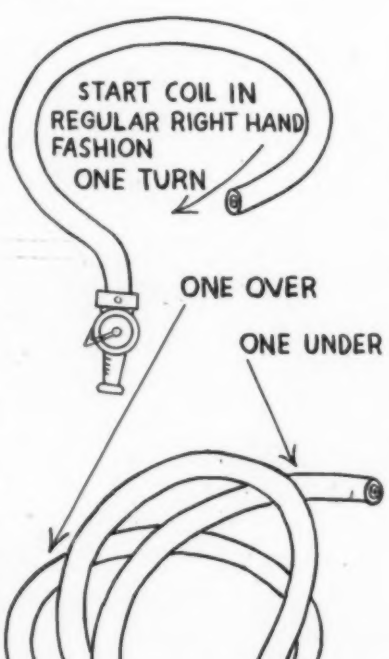
From N. R. Wypruk, Montreal, comes another slant on the use of donut roll (spell it as you wish). He says: Many fire departments cannot make use of the "doughnut roll" on their pumpers or hose trucks because of narrow hose bays. This problem can be solved by making oval doughnut rolls by the following method: Fold hose in two, male coupling over female coupling; take about 12-in. of hose at the starting point and fold until the oval is completed. In order to assure firmness and uniformity, two men should be used to make this roll, as a loose roll will be a liability rather than an asset during fire operations."

Seems to us some of our constituents are already following this practice. At any rate, we'll be glad to hear from readers on it.

* * *

A KINK TO END KINKS

From Chief James Thompson, Irvington, N. J., comes this suggestion to simplify coiling down booster hose in such wise that it can be uncoiled without kinking.


START COIL IN REGULAR RIGHT HAND FASHION ONE TURN
ONE OVER
ONE UNDER
CONTINUE ONE OVER AND ONE UNDER FOR FULL LENGTH OF THE COIL

Chief Thompson writes: "Here's an old one that I brought back from the Navy in 1920 when we had to coil wire rope so it didn't kink when it was run out. The trick is to put the kinks in when you coil it! It works swell on booster hose when stored in a basket. Try it on your garden hose and be surprised."

PROTECTION BY FOG PATTERN

If you've got a fog nozzle, or fog applicator on your line, it's a good plan to open it up in advancing the line through any closed door where there is reason to believe there is fire or concentration of hot gases on the other side. As one chief instructs his men: "If you feel the door and it's hot to the touch, and you've got to advance through that opening, do so behind the protection of fog. That way, you stand less chance of injury by back draught or other explosion which may follow the opening of a closed door or shutter.

* * *

The Old Timer Says—

A lot of firemen have been injured by falls caused when they stepped off a ladder or fire escape through a window or other opening, only to tumble into a shaftway or down flight of stairs. Some cities require that all openings leading to shaftways and like be so indicated that a fireman can know what he's getting into. A lot of places, however, don't have such regulations—more's the pity!

Signal Engineers to Meet in Buffalo

The 53rd Annual Meeting of the International Municipal Signal Association will be held at the Hotel Statler, Buffalo, N. Y., October 4-7, 1948 according to Irwin Shulsinger, Secretary. Joint chairman for the convention is Chester Kern, Supt. Police Signal System, Buffalo, and Leo O'Hara, Supt. Fire Alarm of the same city. Everett Zeh, Supt. Fire & Police Telegraph System, Schenectady, and Henry Osborne, Traffic Adviser, Div. of Public Safety, Buffalo, are chairmen of exhibits and entertainment, respectively.

Subjects which will be covered by outstanding authorities at the meeting include municipal fire alarm; police and traffic signals; police and fire department radio; street and airport lighting, etc. Exhibits will be displayed in the Hotel Exhibit Hall. A special entertainment program has been planned.

Eight-Year-Old Starts $250,000 Fire

An eight-year-old boy was blamed by officials for starting a $250,000 fire at New Milford, Conn., on February 16, 1948.

The fire destroyed the interior and left only brick walls standing of the H. H. Allen Buildings, on Main St., in New Milford, and brought injuries to three firemen.

The boy, alone in the building, said he was playing with matches, and when one burned his fingers he dropped it into a pile of papers. He tried to put the blaze out and then ran home remaining there.

The fire was discovered at 6:40 P.M., a few minutes later, and raged out of control for more than five hours. The fire was finally brought under control by three pieces of apparatus of the New Milford Volunteer Fire Department and one truck each from the Washington, New Preston, and Gaylordsville Volunteer Fire Companies. — FLETCHER E. COOPER [Our youngest correspondent, age 14.—EDITOR].

News of the Manufacturers

Hanna Appointed by Federal

William E. Hanna has been appointed by Federal Telephone and Radio Corporation, Clifton, N. J., affiliate of International Telephone and Telegraph Corporation, as sales engineer for mobile communications equipment in Illinois, Wisconsin and Minnesota. He will operate out of Federal's Chicago office, 343 No. Michigan Blvd.

Mr. Hanna has been in the radio and electronics industry for many years, starting as an amateur in 1910. He operates a 500 watt amateur radio station with the call letters W9EHJ and is known as one of the nation's leading "hams." Prior to joining Federal he was with the American Phenolic Corporation.

New Fire Fighting Trailer

A new fire fighting trailer designed and equipped by National Foam System, Philadelphia, for use in industrial plants, the petroleum industry and on airports, produces 2,500 gallons of fire foam (Aer-o-foam) in less than two minutes.

New National Foam Fire Fighting Trailer, as Pulled by Jeep or Pickup Truck

Pulled by a jeep or pickup truck, the new trailer has a two-compartment tank carrying 250 gallons of water and 25 gallons of special foam-making liquid which, when mixed mechanically with the water, produces 2,500 gallons of heavy, thick, snowy-looking foam.

Petroleum installations, industrial plants and airports are expected to be particularly interested in the new foam trailer because of greatly expanded petroleum production, increased aviation activities and industrial plant expansion.

Specifications include two all-purpose National foam nozzles for use with water or foam.

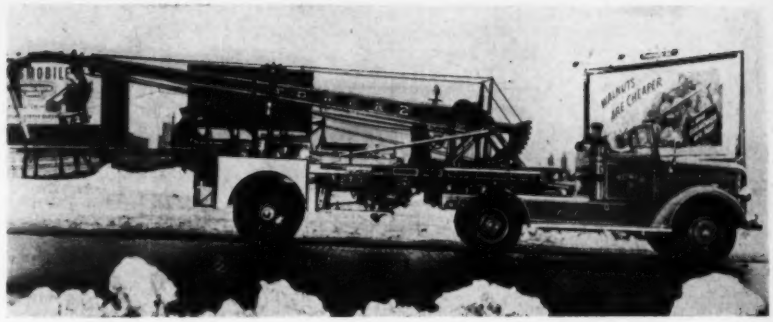
Fifty gallons of Aer-o-foam liquid, including the 25 gallons in the two-compartment tank. One CO_2 extinguisher and mounting.

Two hose reels—maxim automatic type with adjustable stuffing boxes. Capacity: 100 feet, 1 inch booster hose.

Pump produces 100 pounds pressure. FZZ pump to be piped to the water tank, discharge of pump to be piped directly to the hose reels with individual valves on each reel. Foam proportioner is mounted on FZZ pump which has capacity of 60 gallons per minute at 100 pounds, 100 gallons at 78 pounds and 150 gallons at 46 pounds.

Dual wheels are of pressed steel. Two hydraulic shock absorbers are furnished. Tires are 6.50 by 16, 6 ply, four supplied. Front landing gear is retractable. Both electric and hand brakes. Trailer frame is of steel, welded construction. Axle capacity is 5,000 pounds.

Trailer has connection cable and safety switch for hooking onto a jeep or pickup truck. Breakaway and safety chains are provided.



Boston Water Tower Passes Half-Century Mark

Horses were standard fire department equipment when the city of Boston purchased Water Tower No. 2 in 1894. During the ensuing 54 years, this tower has faithfully served the city; and during these years horses have disappeared from fire houses and fire-fighting techniques have undergone complete revolution. But the veteran tower, newly converted and teamed with a Mack tractor, still retains its place in the front ranks of Boston's fire-fighting equipment, and faces what the Department expects to be many more years of active service.

American Elkhart Company Organized

Under a new and closer working arrangement with the Elkhart Brass Mfg. Co., of Elkhart, Indiana, and in line with a program of expansion, the American Fire Equipment Company of San Francisco, with branches in principal cities on the Pacific Coast, has reorganized and changed its name to the American Elkhart Company.

The new company will act as Pacific Coast Distributor of Elkhart Brass, continuing also to represent various other fire equipment lines handled under the previous setup.

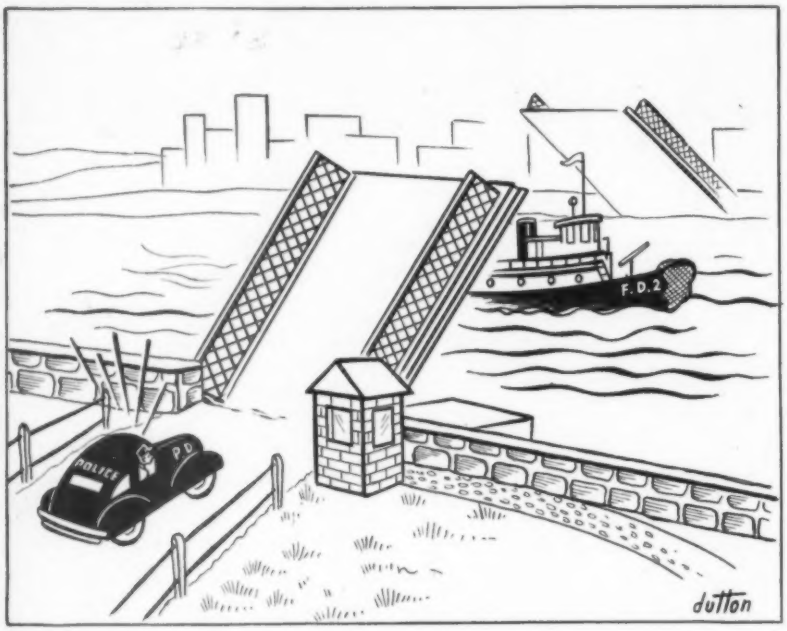
C. J. McCarthy is President of the American Elkhart Company; H. E. Albro, Vice-President and General Manager; and W. E. Wilkinson, Secretary-Treasurer. The directors are F. L. Albro and E. H. Hansen in addition to the officers. Offices and warehouses are

(Continued on page 322)

Fire Company Gets New High Pressure Unit

A new "first-due" unit has recently been added to the fire fighting forces of Columbia, Pennsylvania. The unit pictured here features a Hardie high pressure pump (60 GPM at 800 pounds), two 250-foot high pressure hose reels each equipped with a trigger controlled fog gun, a 400-gallon water tank built in an L-U shape, forming two body length seats for eight men, with a walkway through center of body. Usual ladders, suction hose and other fire fighting equipment are also carried. The unit, built by Oren-Roanoke Corporation is owned and operated by the Keystone Truck & Chemical Engine Co., No. 1, at Columbia.

FALSE ALARMS



"We Can't Kick. After All, It Is a Fireboat!"

Precaution

The wife of a successful businessman, wishing to return the kindness of several of her friends, invited them all to dinner. She planned to give them a mushroom steak dinner. When Nora, her cook, opened the can of mushrooms preparatory to making the sauce, there was a slight scum on top. The time being short, the lady suggested, "Give the dog a little, Nora, and if he eats it, it's probably all right" Since the dog liked it and begged for more, the dinner was prepared as planned.

After the guests had all enjoyed their dinner, Nora came in white-faced with the dessert and whispered tragically to her mistress, "Ma'am, the dog's dead." There was just one thing to do and the businessman's wife did it.

Some time later when eight people were lying around in various states of recovery and the doctor had departed with his stomach pump, the lady thought wearily to ask, "Nora, where's the poor dog?"

"On the front steps, Ma'am, where he lit after the car hit 'im."

Riddle

An Englishman was conversing with the clerk in the Ambassador Hotel. "Here's a riddle," said the clerk. "My mother gave birth to a child. It was neither my brother nor my sister. Who was it?"

Englishman: "I can't guess."

Clerk: "It was I."

Englishman: "Ha, Ha! Very clever. I must remember that."

The Englishman then told the story at his club. Said he: "Here's a riddle, old top. My mother gave birth to a child, and it was neither my brother nor my sister. Who was it? You can't guess? Do you give up?"

"Yes."

"Ha, ha! It was the clerk at the Ambassador Hotel."

Prisoner: "But, Your Honor, she keeps irritating me all the time."

Judge: "How does she irritate you?"

Prisoner: "Why, she keeps saying: 'Hit me! Beat me! Go on, just hit me once, and I'll have you hauled up before that bald-headed old reprobate judge, and see what he'll do with you!'"

Judge: "Prisoner discharged!"

No Hobo

"Dear," cooed persuasive Polly, "it always makes a hit with father if my boy friends help him a little bit on his garden."

"Well," rejoined stubborn Sidney, "you can tell your old man that I'm not a hoe-beau."

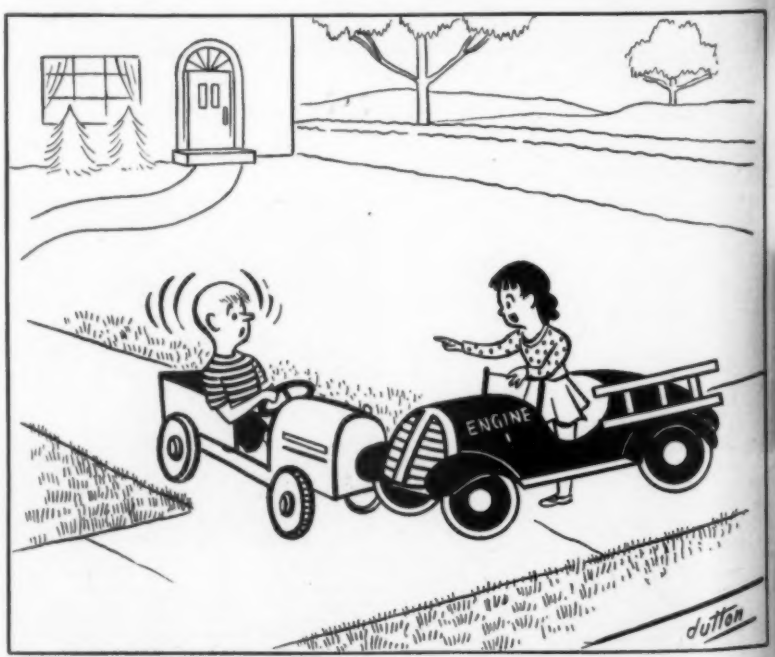
The Tennessee mountaineer up and got married. He built his new bride a cabin, and when it was completed, he fetched her to come and give it a looksee.

"Wal," said the hill william, surveying his labors with pride, "how d'ya like yer new home, woman?"

"Not bad, husband," she said, "but I don't see no door."

He looked at her in amazement. "Door?" he demanded. "Yew plannin' on a 'goin' somewheres?"

My wife and I our costumes choose
Of similar styles and stocks;
Milady wears the toeless shoes,
And I the toeless socks.



"Ronald, You Know the Fire Department Always Has the Right of Way!"

MATCH YOUR BREATHING HAZARDS WITH . . .

*Correct Protection**

OFFICIALLY APPROVED BY THE U. S. BUREAU OF MINES

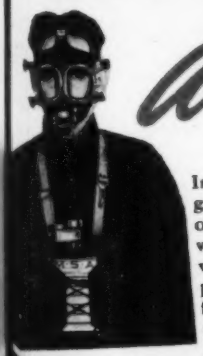
FOR OXYGEN DEFICIENCIES, HEAVY GAS AND SMOKE CONCENTRATIONS —45-MINUTE MINIMUM SERVICE

The UNIQUE M·S·A Chemox SELF-GENERATING OXYGEN BREATHING APPARATUS

TRADE MARK REGISTERED

For complete respiratory protection in unbreathable air—in choking smoke, poisonous gases, oxygen-lacking atmospheres—use CHEMOX! This comfortable, easy-to-use apparatus *makes its own oxygen* as you breathe, with a replaceable chemical canister . . . weighs only 13½ lbs. complete . . . no high-pressure cylinders, valves or fittings . . . delivers a full forty-five minutes' service time under hard physical work. Write for the facts in Bulletin B-14!

FOR GASES AND SMOKE . . . WHERE OXYGEN IS SUFFICIENT IN AIR



M·S·A All-Service GAS MASK

In air contaminated with smoke or gases, but containing 16% or more of oxygen, this famous gas mask provides protection recognized everywhere for dependability and simplicity. Lightweight harness allows full working freedom—All-Service canister is quickly replaceable. Bulletin EA-8.

½ HOUR SERVICE FOR OXYGEN DEFICIENCIES, GASES AND SMOKE

M·S·A Demand Mask

Supplying compressed oxygen or certified pure air from back-carried cylinder to the facepiece, the M.S.A. Demand Mask protects the wearer in toxic or oxygen-deficient atmospheres for a period of one-half hour. Bulletin B-16.

MINE SAFETY APPLIANCES COMPANY

Braddock, Thomas and Meade Sts. Pittsburgh 8, Pa.

District Representatives in Principal Cities

In Canada: MINE SAFETY APPLIANCES COMPANY OF CANADA LIMITED

TORONTO · MONTREAL · CALGARY · VANCOUVER · WINNIPEG · NEW GLASGOW, N.S.

World Wide Fire News

By Roi B. Woolley

Communists Blamed for Brazil Blast

Twenty-three persons were known to have been killed, and between 100 and 200 injured, in an explosion in the Brazilian Army's Deodoro Arsenal, about fifty miles from Rio de Janeiro. Police sought twelve girl employees who were trapped in a nearby textile mill. Walls crumbled within a mile radius of the scene. The damage was expected to exceed $1,000,000.

Following the explosion, Brazilian Federal police arrested twenty-six Communists as directly implicated in the disaster. Police claimed the explosion was intended as the beginning of a Communist plot in Rio de Janeiro in which the plan was to kill the Brazilian War Minister, Gen. Canrobert Pereira da Costa, at the arsenal. One person was caught carrying grenade caps, police reported. Seven women Communists were arrested for distributing Communist pamphlets immediately after the explosions, five in all, which wrecked the arsenal.

* * *

U. S. Blamed for Texas City Blast

The Federal Government was blamed, in April, for the Texas City explosion, to the tune of more than $90 million in lawsuits. Eight suits totaling $55,208,446, including a $50,000,000 claim by the Monsanto Chemical Company, were filed in Houston, Tex., for transfer to Galveston where trials are scheduled to begin in June.

The suits followed one year after the worst industrial tragedy in world history, which took the lives of 512 persons and injured an estimated 3,000 others.

Monsanto's suit alleged the Government "had knowledge of the potential hazards" of the ammonium nitrate, but that it was packed and shipped from Government plants while "innocently labeled fertilizer."

Claims seek damages for deaths, personal injuries, property damage, reimbursement for insurance payments, recovery of profits lost by plant destruction and damage and loss of services of technically trained personnel killed in the disaster. Attorneys predict the final total of suits may exceed the $100 million mark. The property losses were originally estimated by underwriters at approximately $50 million.

* * *

Syrian Mobs Use the Torch!

Information from Damascus states that mobs in an orgy of destruction put the torch to a 2,750-year-old synagogue in the Jewish quarters of Aleppo, ruining a library which included a priceless Bible.

Mobs set fire to more than 15 houses, 50 shops, 10 synagogues, an orphanage, a youth club and a restaurant in the Jewish community. One Jewish agency reported eight Jews were killed.

* * *

Three G.I.'s Die in Set Fire

Three American soldiers were burned to death in a fire which destroyed their barracks March 31 in Pushan, Korea. Another was missing and believed dead, and a fifth suffered a broken leg.

Fifty members of a detachment were routed out before dawn by the blaze which destroyed the two-story barracks of the Sixth Signal Company. Sixth Infantry Division authorities were holding a soldier on suspicion of "wilful" homicide. He is suspected of having tossed a can of gasoline into a coal-burning heater shortly before midnight, following an argument with the sergeant of the guard.

* * *

Coast Guard Warns of Japanese Mines

Five Japanese mines were washed ashore off the Oregon and Washington coasts, April 11, and the Coast Guard warned the public again to stay clear of the explosives. A sixth mine was exploded by Coast Guard rifle fire off the mouth of the Columbia River.

This brought the total sighted on the coasts of the two states to thirty-three in the first eleven days of April. The mines drifted across the North Pacific from Western Pacific waters mined by the Japanese during the war. Many are "dead," but some are "alive" and constitute a menace to coastal shipping lanes, it is reported.

* * *

Hot Off the News Ticker

Fire destroyed the Fine Arts Academy in Istanbul, Turkey, April 2, causing damage reported at $1,000,000. . . . The city of Magangue, Colombia (30,000 pop.), 125 miles south of Barranquilla, was partially devastated by fire, and 3,000 persons made homeless. . . . It was stated in mid-April that the White House in Washington, D. C., is one of the worst fire traps in the nation. Re-

SAVED!
1/3 MORE SPACE FOR EXTRA FOOTAGE
with Quaker
Easy-fold construction
Compare Quaker Modern Municipal Fire Hose with Easy-fold construction and see how flatly it folds, how compactly it packs, allowing up to ⅓ extra footage in trucks. That means 33% greater fighting power for dousing hard-to-reach fires.
Strong, specially-woven, cotton jackets protect the slow-aging rubber tube, assuring sturdy resistance to pressure, abrasion, severe usage.
Check your equipment today. Play safe and order a supply of Quaker Modern Municipal Fire Hose with EASY-FOLD construction. It's reliable protection for cities, towns, industrial plants.
QUAKER RUBBER CORPORATION
PHILADELPHIA 24, PA
QUAKER PACIFIC RUBBER COMPANY

ROCKWOOD'S *GROWING FAMILY*

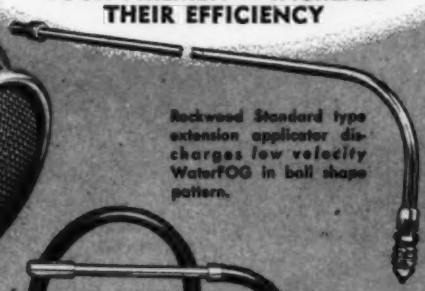
of MODERN FIRE FIGHTING TOOLS will HELP YOU REDUCE FIRE LOSSES

THESE ADVANCED TYPES OF FIRE FIGHTING EQUIPMENT PROTECT YOUR FIREMEN — INCREASE THEIR EFFICIENCY

Rockwood lightWEIGHT triple-action type SG-48 WaterFOG Nozzle. Discharges *high velocity* WaterFOG, straight stream or *low velocity* WaterFOG from LightWEIGHT Extension Applicator. Available in ¾", 1", 1½" and 2½" hose size.

Rockwood Type B, 500 GPM, *High Capacity* WaterFOG Nozzle for use on deluge guns, ladder pipes, etc.

New Type FFF Rockwood FogFOAM Nozzle. Available in three sizes for service on 1½", 2½" or 3½" hose. Discharges (1) a wide protective pattern of FogFOAM (with FogFOAM screen) (2) a long range solid foam stream (with foam shaper) (3) or, by shutting off Foam liquid supply, an excellent *high velocity* WaterFOG pattern is discharged.



Rockwood Standard type extension applicator discharges *low velocity* WaterFOG in ball shape pattern.

Rockwood WaterFOG Collar and Attic Pipe rotates freely without vibration (equipped with thrust bearings). Discharges WaterFOG in any position, easy to handle in action. Fights fires in collars and attics, under piers and bridges, etc. Available in 1½" and 2½" hose size.

Rockwood type H-22 WaterFOG Nozzle Available in ¾", 1", 1½" and 2½" sizes.

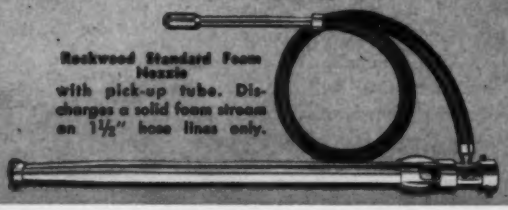
Rockwood Type H-23 WaterFOG Nozzle available in 1½" and 2½" sizes. Equipped with swivel handles that rotate freely. Discharge provides special personnel protection.

Rockwood Applicator Clips for mounting extension or standard types Rockwood WaterFOG applicators on fire trucks, walls, posts, etc.

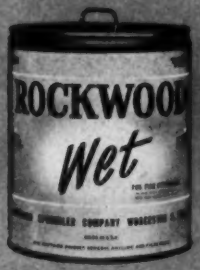
Rockwood Handles Available in 1½" and 2½" sizes for all Rockwood Nozzles.

Rockwood Foam Eductor supplies 6 parts foam liquid to 94 parts water for type FFF Rockwood FogFOAM Nozzle. Can be installed on fire truck, between hydrant and hose, or between two lengths of hose.

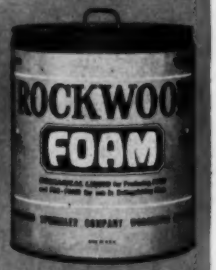
Rockwood Standard shut-off available in ¾", 1", 1½" and 2½" sizes.



Rockwood Standard Foam Nozzle with pick-up tube. Discharges a solid foam stream on 1½" hose lines only.



Rockwood "Wet" Wetting agent or penetrant for fighting fires.



Rockwood Foam A mechanical liquid type Foam for producing Foam and FogFOAM for use in extinguishing fires.

ROCKWOOD

ROCKWOOD SPRINKLER COMPANY

54 HARLOW STREET WORCESTER 5, MASSACHUSETTS

Specialists in Fire Protection Engineering, Equipment and Installation since 1907

quest has been made for $50,000 for a "study of what to do about the situation." . . . The "Empress of the Skies," a Pan American World Airways Constellation, crashed while coming in for a landing at Shannon Airport, Eire, Ireland, on April 15, and thirty persons, including nineteen Americans, died in the blazing wreckage. One American passenger was the sole survivor. . . . Fates were kinder in Perth Amboy, N. J., when a single-engined monoplane crashed into a storage tank of the California Oil Company, on April 12; both occupants of the plane were thrown out and killed, but no fire ensued. . . . Three persons were killed and five others injured, April 7, in an explosion at the plant of the Railway Signal Company, New Waverly, Ind. Plant makes railroad flares among other things. . . . Improved weather conditions, about the middle of April, cheered fire-fighters of Maine who were on guard against new blazes in the state's parched woodlands. Half a dozen buildings and over 1,200 acres of scrub growth were swept April 10-11 in the first Spring outburst of fires. . . . Three children were trampled to death, March 28, in Monterrey, Mexico, when a false fire alarm caused panic in a movie house. Thirty-six adults and children required hospital treatment. A boy was said to have started the stampede. . . . Two air force men were killed when their P-61 fighter plane crashed and burned in a wooded area near Mitchel Air Force Base, L. I., after hitting a highway, narrowly missing several automobiles, and bounding across the road. . . . The tornado which swept part of Indiana the end of March, caused wind and water damage in Grant County of over $3,000,000. Fortunately, fires were held to a minimum. . . . Chinese press reported on April 7 that twenty Buddhist monks were burned alive after refusing to flee their flaming monastery. They chanted scriptures while the ancient building burned at Chinkiang, 140 miles west of Shanghai. The Abbot was prevented by firemen from rushing into the building to perish with his disciples, the dispatch added. . . . On two occasions, light and power systems in Suffolk and Nassau, L. I., Counties were made partially inoperative by planes which severed high tension wires. . . . Fire early on April 8 periled the vast New York Shipbuilding Co.'s plant along the Delaware River in Camden, N. J., involving one of the main buildings opposite the main gate. . . . Starting June 1, the Army will undertake a series of tests in underground explosions to determine the best construction to resist attack by guided missles and modern heavy bombs. . . . The B-29s which flew non-stop Hawaii to Florida on March 22 carried fuel loads of 6,700 gallons of high octane gas. . . . The City of Tuscaloosa, Ala., had the jitters when it was learned that a veritable ammunition dump had been carted into the heart of the business district as scrap iron and steel. Disclosure followed explosion at a scrap yard in which a "dud" blew up and hurled an empty 155-mm shell casing more than two blocks to crash through the roof of a downtown department store. . . . Army bomb-disposal squad found loaded shell caps, anti-tank rockets, rifle grenades and bazooka rockets, all much "alive" in the dump. . . . It is now disclosed that saboteurs set fire to an oil well on the Perrylands field in South Trinidad last Christmas Day—the second big fire of 1947 on the same property. . . . Fire, April 2, destroyed a U. S. Navy cold storage shed, at Guam—preliminary estimates placing the damage at $1,000,000.

Available in all standard sizes, styles and finishes. Shown here is a 2½-inch close up type combination playpipe and nozzle.

WHY THE TRUMPET QUADWAY IS STILL THE WORLD'S FINEST NOZZLE

Because with instant, finger-tip control it gives you the right kind of stream—when you want it. A full volume, solid straight stream, a dense fog mist, or a combination of both in any varying degree. And for confined or liquid fires, the free-swiveling Quadway Applicator is quickly attached. But see for yourself. Discover why thousands of the nation's departments, both large and small, have standardized on this precision nozzle. Your Wooster Brass representative will be glad to arrange a demonstration—at your convenience—and with absolutely no obligation to you.

WRITE DIRECT OR CONTACT YOUR LOCAL WOOSTER BRASS REPRESENTATIVE

HOSE BRASS GOODS W LINE THE WOOSTER BRASS CO. WOOSTER, OHIO

THE WOOSTER BRASS CO.

WOOSTER OHIO

Questions and Answers

Salt Water in Mains

To the Editor:

In what cities in the United States do they use salt water in their fire hydrant system and what method, if any, is used to keep pieces of apparatus and hydrant pipes from corroding?

We understand the City of San Diego, Cal., uses this kind of water in its mains. Is this true?

C. L.

Answer: No cities use salt water in their domestic or low pressure water mains for the obvious reason that it is not potable.

A number of cities located on salt water which have high pressure systems, have waterside connections whereby salt water can be used in those systems in an emergency (such as failure of the fresh water supply). Among these are Boston, Mass.; Baltimore, Md.; Philadelphia, Pa.; Oakland, Cal.; Miami, Fla.; Los Angeles, Cal.; Jacksonville, Fla.; New York and San Diego. None of these cities, however, normally uses salt water in their high pressure systems. New York at one time

took its high pressure supplies from salt water but this was discontinued because of the corrosive action of such water on the pumping equipment and mains.

According to report of the National Board of Fire Underwriters (No. 123, July, 1938), San Diego derives its water from reservoirs and tanks, an area including the congested value district being supplied under regulated pressure and five widely separated residential districts are supplied by intermittent pumping and elevated tanks. Two pumping stations are used only for emergency. The "Pacific Beach and Norena stations are booster stations." The San Diego River has three well fields used to augment the supply. There are no high pressure connections.

Good maintenance of apparatus and water distribution system calls for thorough and adequate flushing of the equipment and system as soon after salt water has been used, as possible. Where apparatus has been winterized by the addition of anti-freeze to the cooling system, it may not be practicable to flush the radiator, which would result in loss of the anti-freeze. Corrosive action of salt water depends upon a number of factors such as degree of salinity of water, its temperature, metal or other material with which it is in contact, etc.

Standpipe Calculations, Etc.

To the Editor:

Please answer the following questions:

1. We assume 25 pounds friction loss in standpipes plus .434 per foot for back pressure. We are also told to allow 15 pounds for a water tower regardless of height. Now wouldn't you also allow back pressure according to height of nozzle from ground?

2. We also allow 15 pounds friction loss for monitors and wagon batteries. Would you say there was 15 pounds average loss in a ladder pipe?

3. How much friction loss would you say is lost in a Larkin cellar pipe?

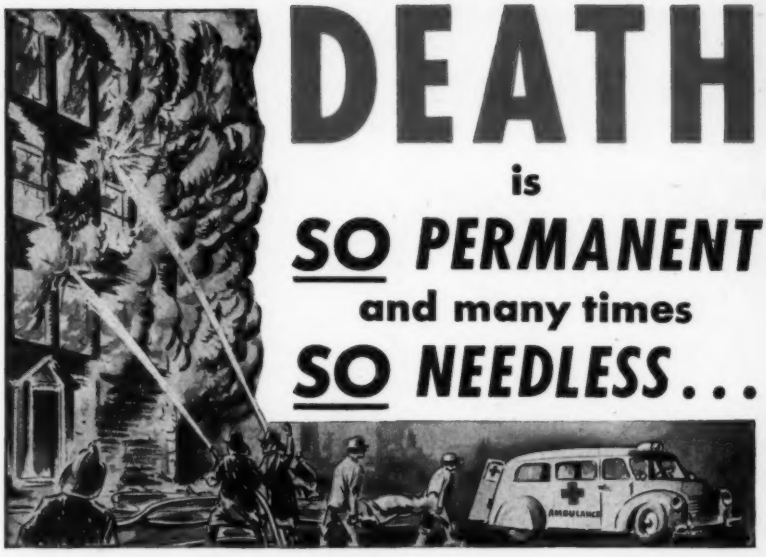
4. Here is a hydraulic problem no one seems to be able to solve: A tank of water 20 feet high sets 30 feet high over a building 13 stories in height.

At the 8th floor a monitor with one 2½-inch line connected to the fire floor (2 sections).

Another 2½-inch line to the set is connected to the 7th floor (3 sections). The set is using a 1½-inch tip at 80 pounds nozzle pressure.

At the ground a 1,000-gallon pumper has two 200-foot lines of 2½-inch hose into the standpipe. What is the engine pressure? How would you treat the static pressure from gravity tank. If engine pressure exceeds static pressure from tank at fire floor, does a clapper valve close at the bottom of the tanks?

5. Here is another problem. A tank holds 331 gallons. One pipe fills it in 35 minutes. Another pipe empties it in 1 hour. If both pipes are operating



DEATH
is
SO PERMANENT
and many times
SO NEEDLESS...

A Scott Air-Pak should be used

FIRST NOT LATER!

● Designed as fighting equipment, the Scott Air-Pak should be used on arrival at a fire, *not after* men have collapsed from deadly fumes or choking smoke. Instantly ready for use, the Scott Air-Pak delivers fresh, cool *air* (not oxygen). Each inhalation provides *all* the fresh air demanded by its wearer, regardless of age, physical condition or lung capacity. Therefore use of the Scott Air-Pak is not restricted to younger men, or men in top physical condition.

Wire or Write for a Demonstration

BUREAU OF MINES APPROVAL No. 1308

ONLY THE SCOTT AIR-PAK HAS ALL 6 FEATURES

1 Can be used in any temperature from below zero to oven heat.

2 Only the Scott delivers fresh, cool, confidence-inspiring air.

3 Only the Scott has a gauge on the cylinder to prevent the inadvertent use of empty or partly empty cylinders.

4 Only the Scott has acid and corrosion proof straps and fittings.

5 Only the Scott has a battle-tested emergency proved regulator, and a mask permitting conversation.

6 Only the Scott has a gauge within the wearer's vision; custom-built, not a commercial gauge, to provide the maximum in utility and safety.

SAFETY EQUIPMENT DIVISION
SCOTT AVIATION CORP.
215 ERIE STREET, LANCASTER, N. Y.

Established in 1932
Scott
FOR SAFETY—FOR SERVICE

"THERE CAN BE NO COMPROMISE WITH QUALITY WHEN A LIFE IS AT STAKE"

More Firemen
ask for
"SIREN" Boots
than any other name or brand

This is your guarantee of foot comfort, safety, long wear

Sold only through authorized distributors

A PRODUCT OF
BEACON FALLS RUBBER FOOTWEAR
BEACON FALLS, CONNECTICUT

together, how long will it take to fill this tank? O. W. C.

Answer 1: Twenty-five pounds friction loss in a standpipe is the figure usually taken in solving hydraulic problems.

However, the friction loss varies widely as will be indicated by the following table reprinted from "Fire Prevention and Protection" by A. C. Hutson.

FRICTION LOSS IN STANDPIPE PER 100 FEET*

Gallons	4-Inch	6-Inch
200	2	0.3
300	4	0.6
400	7	0.9
500	10	1.4
600	14	2.0
700	19	2.7
800	24	3.4
900	30	4.3
1,000	37	5.2
1,200	52	7.5
1,400	69	10.0

*An allowance equal to 100 feet of pipe should be made for loss at siamese, in bends, etc.

A friction allowance of 15 pounds is usually considered satisfactory for a water tower regardless of the height, but the back pressure varies with the height of the nozzle above the ground. The back pressure is taken at .434 pounds per foot elevation of the nozzle above the pump.

Answer 2: As with the standpipe, friction loss in wagon batteries varies with the flow and the particular design of the battery. Fifteen pounds would be satisfactory for friction loss in such layout. In a ladder pipe, the friction loss would probably be less, with a maximum of 10 pounds. Here again the friction loss varies with the flow. Fifteen pounds would be satisfactory for very large flows.

Answer 3: In a Larkin cellar pipe a friction loss of 10 pounds should be about right for average conditions.

Answer 4: The nozzle pressure is 80 pounds per square inch.

The back pressure = 7 x 12.5 x .434, or 38 pounds approximately.

Friction loss in the standpipe is taken at 25 pounds, although actually for this flow it may be less. However, the error is on the side of safety.

The hose layout consists of two lines of 2½-inch hose, one of 100 feet length and the other 150 feet length.

The average length of the two is 125 feet.

Then there are two parallel lines from the engine to the standpipe.

The total of hose is then two parallel lines 125 + 200, or 325 feet long each.

Change this layout to a single line of hose, employing the factor 3.6.

325 ÷ 3.6 = 90.3 feet.

Now solving for engine pressure (neglecting the back pressure and friction loss in the standpipe for the time being), we have:

E. P. = N. P. (1.1 + KL)
= 80 × (1.1 + .505 x 1.8)
= 80 × 2.009
= 160.72, or 161 pounds approximately.

Now add to this engine pressure the back pressure and the friction loss in the standpipe, and we have a corrected engine pressure of 161 + 38 + 25, or 224 pounds.

The height of water in the standpipe above the nozzle on the hose layout is 75 feet (six stories, of 12½ feet) plus 30 feet (height of tower) plus 20 feet (height of tank), or a total of 125 feet.

This head of water represents a pressure of 125 x .434, or 53.25 pounds.

The pressure in the standpipe provided by the pumper must be over 80 pounds on the eighth floor, as the nozzle pressure alone is 80 pounds. Thus the pressure provided by the pumper is greater than that provided by the head of water above the outlet on the eighth floor so that if a clapper valve were provided in the riser to the tank, it would close. The static pressure in the standpipe and tank would have no effect upon the nozzle pressure or upon the operation of the pumper.

Answer 5: The tank holds 33 gallons. One pipe fills it in 35 minutes, or in each minute it delivers 1/35th of the capacity to the tank.

One pipe empties it in one hour, or discharges from the tank 1/60th of its contents per minute.

One thirty-fifth is equal to 12/420; 1/60 = 7/420.

Thus if one pipe is emptying the tank while the other is filling it, the amount of water gained by the tank per minute will be 12/420 — 7/420, or 5/420.

The number of minutes required to fill the tank under such condition would be 420 ÷ 5, or 84 minutes.

Nozzle Pressure on Standpipe Layout

To the Editor:

An engine at 200 pounds pressure is pumping through two parallel lines of 2½-inch hose 800 feet in length. These two lines are siamesed into the street connection of a standpipe system. On the 9th floor, a 100-foot line of 2½-inch hose is connected to the standpipe outlet, and a 1¼-inch nozzle is used. Assuming 12½ feet per story, what will the nozzle pressure be?

T. H. F.

Answer: Change the layout to a single line of 2½-inch hose.

Two parallel lines of 2½-inch hose, 800 feet in length each, are equivalent to 800 ÷ 3.6 = 222.22 feet of 2½-inch hose, single line.

222.22 + 100 = 322.22 ft., the length of 2½-inch hose, single line, equivalent to the layout given in the problem.

Before solving for nozzle pressure, it will be necessary to subtract from the engine pressure, as given, the back pressure and the friction loss in the standpipe.

The elevation of the nozzle above the engine is equivalent to 8 x 12½ ft., for the nozzle is 8 stories above the engine.

8 × 12½ = 100 feet.

Back pressure is then equal to 100 × .434 = 43.4 pounds.

Friction loss in standpipe is 25 pounds.

The engine pressure available for overcoming friction loss in hose and giving nozzle pressure is then 200 — 43.4 — 25 = 131.6 pounds.

N. P. = E. P. ÷ (1.1 + KL)

E. P. = 131.6 pounds.

K for 2½-inch hose and 1¼-inch nozzle = .248

L = 322.22 ÷ 50 = 6.444.

Then

N. P. = 131.6 ÷ (1.1 + .248 x 6.444)
= 131.6 ÷ (1.1 + 1.598)
= 131.6 ÷ 2.698
= 48.77, or 49 pounds approximately, the pressure at the nozzle.

Persons in the News

A. Cary Hutson Retires

The retirement of A. Cary Hutson, Assistant Chief Engineer of the National Board of Fire Underwriters with 43 years' active service, was announced April 30 at a National Board luncheon in his honor.

Mr. Hutson will immediately leave to undertake an assignment for the Hawaii

A. C. Hutson

Fire Rating Bureau to grade all communities in Hawaii, with the exception of Honolulu, already inspected by Board engineers. Upon completion of the project, he will return to the United States to continue private work in fire prevention as a special consultant and writer on fire safety problems.

Mr. Hutson has been engineer, editor of publications on fire safety issued by the National Board of Fire Underwriters and lecturer before various engineering and civic organizations. He has investigated and reported on some of the most famous fires in the country.

A graduate of Texas A. & M. College, he worked for three years in the Engineering and Maintenance Dept. of the Gulf, Colorado and Santa Fe R. R. Following this he attended Cornell University and five days after he received his degree in Civil Engineering in June, 1905, he joined the National Board of Fire Underwriters as assistant engineer.

He has been largely responsible for the preparation of the Standard Schedule for Grading Cities and Towns of the United States now used in the classification of cities and has authored most of the 266 bulletins of special interest issued by the National Board since 1933 on almost every phase of fire protection. He has edited the Fire Prevention Ordinance for 20 years and has aided in the preparation and subsequent revisions of the building code issued by the National Board.

A veteran on studying and analyzing conflagrations, his reports of their causes and extent of destruction have been published by the National Board. One of his most sensational assignments was the recent Winecoff Hotel fire in Atlanta, Ga., which took the lives of 119 persons.

His findings, which were widely

You are always assured of a full, steady stream at top pressure with Eureka "Streamlined" Fire Hose. "Washboarding" is eliminated because Eureka's Smooth-Interior Filler Ply keeps the inner surface of the jacket perfectly smooth and level at all times.

The aging qualities of Eureka rubber linings are proved in advance by the Oxygen Bomb Test. Strong and tough though Eureka is, it also has a high degree of flexibility, thanks to the Eureka Balanced Weave which produces a fabric of correctly twisted cords under uniform tension.

Eureka's patented method of Controlled Curing makes the hose easier and safer to handle. Eureka will not "run amuck"—can be conveniently managed on the ground or on ladders, or when loading on the wagon.

Every length of Eureka is tested for burst resistance, elongation, warp and twist. Mildew-proofing is guaranteed by the unique "Formula X."

EUREKA

"For greater protection to life and property"

EUREKA FIRE HOSE

Division of United States Rubber Company

195 Hudson Street • New York 13, N. Y.

quoted by the press at the time, showed that unenclosed stairways had acted as vertical flues conducting asphyxiating gases up through all the floors.

Mr. Hutson has addressed various fire prevention conferences and local civic groups throughout the country on building codes, water supply requirements, fire alarms and operations of the Fire Department.

Mr. Hutson lives at 27 North 21st St., East Orange, N. J.

Chief Dan Tierney Retires

Daniel B. Tierney has retired as Chief of the Arlington, Mass., Fire Department, his retirement taking effect on April 22. He had completed fifty years of service in that Department on May 26 of last year.

Joining as a substitute call fireman in August, 1896, and as a regular call fireman May 1, 1897, he became the fourth permanent fireman in the department May 31, 1897, at the munificent salary of nine dollars per week, no days off and no vacation, sprinkled the streets in the summer and plowed them in the winter—with horses. The first motorized equipment was bought in 1911 and it was not until 1918 that the department was completely motorized.

January 1, 1922, he was appointed member of the Board of Fire Engineers and its secretary. On May 1, 1923, he was appointed under the Life Tenure Act as the first permanent fire chief of Arlington and the third chief of the department since 1878.

During his regime and under his supervision three of the finest fire stations in the country have been built. He was the pioneer in the annual inspection of the cellars of all residences in the town. In December, 1946, he started the block system of inspections whereby a piece of apparatus equipped with two-way radio and its full crew inspects every building and occupancy in the district it serves twice each month.

In September, 1933, the first fireman training school in Massachusetts opened in Arlington under the auspices of the Vocational Division of the State Department of Education. Several hundred firemen from all of Middlesex County have received diplomas from these classes, which continued up to the beginning of World War II.

Also, firemen from surrounding communities as well as out of State have taken the course in the regular training school.

Chief Tierney has long been a leader in the fire service of the country. He was president of the New England Association of Fire Chiefs in 1934, president of the International Association of Fire Chiefs in 1937, and since 1940 has been secretary-treasurer of the latter organization. Few have done so much as he to build up the International Association of Fire Chiefs. He conceived and established the Committee on Cooperation with the National Board of Fire Underwriters; he instituted Sustaining Members in the Association; and built up the Annual Conference Proceedings to a point where they were self-sustaining.

Chief W. E. Bridge Dies

William E. Bridge, 68, chief of the Druid Hills, Ga. Fire Department, died in April, 1948.

A native of Utica, N. Y., Chief Bridge joined the Chattanooga, Tenn., Fire Department shortly after the Spanish American War, serving for 32 years. He retired in 1936, following which he became head of the Druid Hills organization. The community is a suburb of Atlanta, Ga.

Chief Miles, of Crowley, Killed

Fire Chief John Wesley Miles, 70, of Crowley, La., was killed and his wife injured in an automobile accident near Baton Rouge, La., April 20, 1948, when his car was struck by an Illinois Central train at a grade crossing. Mrs. Miles was not seriously injured.

Chief Miles had been associated with the Crowley Fire Department for over 50 years and was widely and popularly known. He served as Chief since 1910 and had only just been re-elected chief for the 38th time when he was killed.

He was a member of the International Association of Fire Chiefs, and the board of supervisors of the state school in firemanship.

Vincent Kane Dies

Vincent J. Kane, 52, vice-president of the New York Federation of Labor and for sixteen years president of the Uniformed Firemen's Association of New York, died in his sleep, April 16, 1948.

Taken with a heart attack as he napped, members of Police Emergency Squad 11 and doctors summoned by his family were unable to revive him.

FOR *Effective* FIRE FIGHTING

THE DUAL FIRE FIGHTER

The Gorman-Rupp Dual Fire Fighter Pump is designed especially for fire fighting requirements. It gets water to the fire under difficult conditions -- maintains constant high pressure -- works indefinitely without a stoppage. The quickest priming, fastest pumping, "never-say-die" pump made. It's always on the job. Used for FIGHTING FIRES DIRECT it throws 100 GPM at 70 lbs. or 80 GPM at 80 lbs. pressure.

Extremely valuable as a relay or booster pump delivering as much as 175 GPM over a 30 to 50 foot hill through a 300 foot 2½ inch hose.

Easily carried to a source of water inaccessible to the big pumper. It weighs only 155 pounds.

Use it for dewatering purposes and save possible costly damage to the expensive truck pumper.

Positive acting exhaust priming in 15 to 30 seconds -- no time-consuming adjustments between priming and pumping. Little or no maintenance. Surprisingly low cost.

Write for Bulletin FD-3 . . . Some territories still open to recognized fire fighting equipment distributors.

THE GORMAN-RUPP COMPANY

BOWMAN STREET · MANSFIELD, OHIO

As head of New York's unionized firemen, Mr. Kane led many campaigns for their betterment, the most successful being his efforts for the three-platoon system. In 1941, Mr. Kane announced he would not be a candidate for re-election, and he retired from the Fire Department the following October 1, although continuing as vice-president of both the New York Federation of Labor and the International Association of Fire Fighters.

Mr. Kane was born in New York, and before joining the Fire Department on Oct. 16, 1918, he was a passenger rate clerk in the War Department, Washington, and a sergeant in the 27th Division in World War I. In World War II, Governor Lehman appointed him a member of the New York State Committee on Fire Defense. In the Fire Department he served for many years as Secretary of the Pension Board. He was a member of the Anchor Club, Helmet Club, Tough Club, the Holy Name Society, Knights of Columbus and the American Legion, Post 930. He is survived by his widow.

Appointments and Promotions

LAKEPORT, CALIF.—George R. Trumbull has been appointed Chief of the Lakeport, Calif., Fire Department. Previously he served as Acting Chief. He is a veteran of World War I and during the late war was Lake County Fire Coordinator. He is widely known on the coast and is a member of the Pacific Coast Intermountain Association of Fire Chiefs. He is on the Board of Directors of the Northern California Fire Chiefs Association and the Lake County Fire Chiefs and Firemen's Association, and is also a State Deputy of the California State Firemen's Association.

VICTOR P. BARTLEY

At the meeting of the North Fork Volunteer Firemen's Assn. at Shelter Island, March 31 last, the following new officers were elected: John Kaelin of Southold, president; Robert Doucett, Greenport, first vice-president; Cyril McCaffery, Cutchogue, second vice-president; Signey Olmstead, Mattituck, Secretary-treasurer. The next Quarterly meeting will be held in Southold, June 17th.

SOUTHOLD, L. I., N. Y.—Officers of the Southold Fire Department nominated April 8, for the coming year are: Walter C. Williams, Chief; John J. Berry, 1st Asst. Chief; George Stelzer, 2nd Asst. Chief; Howard Terry, Secy.; Carlisle Cochran, Treas.

PORTAGE, WIS.—Arnold C. Rueckert has been named Acting Chief of the Portage, Wis., Fire Department to succeed Rod A. Porter who resigned to become Chief of the Marshfield, Wis., Fire Department.

BARABOO, WIS.—P. L. Loomis has been named Chief of the Badger Ordnance Works Fire Department.

HAYWARD, CALIF.—New officers of the Cherryland Firemen's Association, Cal., were named in March as follows: pres., John Long, who succeeds Edward Foster; 1st vice-pres., Jim Dennis; 2nd vice-pres., Carrel Johannsen; secy.-treas., Clyne Stoops, and sgt.-at-arms, Jim Warntjes.

VICTOR P. BARTLEY

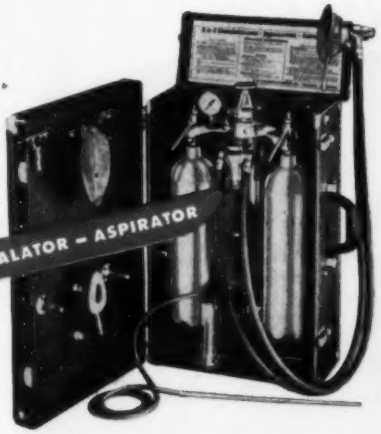
CUT DOWN DROWNING DEATHS with E & J RESUSCITATION EQUIPMENT

THIS SUMMER BE READY for even the most desperate drowning cases with modern, efficient resuscitation equipment.

Before the swimming season gets under way—call in your friendly E & J representative if you need additional, or more modern, resuscitation equipment. If funds are short, your E & J man has a money-raising program to help you. He will be glad to demonstrate the latest E & J Resuscitator, with no obligation to you. After you purchase E & J equipment, he will cheerfully help out in your department's resuscitator-training program.

E & J machines are the choice of alert departments, both large and small, all over the country. To cut down drowning deaths in your area this summer, see your E & J man *now*. Send the convenient coupon below.

Accepted by Council on Physical Medicine, American Medical Association.



TO: Dept. K5, E & J MANUFACTURING CO., Glendale 1, Calif.

☐ Please send representative ☐ Please arrange demonstration

Your name.....

Name of Dept.....

THE NEW DELUXE
WHEAT
Rechargeable Spotlight
NOW AVAILABLE FROM STOCK

ALL PARTS HIGH LUSTRE, CHROME FINISH—EQUIPPED WITH PROTECTIVE LENS GUARD AND ALL-LEATHER CARRYING STRAP

FEATURES

- Less expensive operation than dry cells.
- Free use of hands. Light carries conveniently on shoulder strap.
- Positive "Non-spill" construction.
- Light can be focused and directed as desired.
- Weighs only 95 ozs. complete.
- Simple to charge and water. No need to take lamp apart.
- Price and operating cost make Wheat adaptable to any budget.

2,500 FOOT BEAM
25,000 CANDLE POWER
1,000 HOURS OPERATION

KOEHLER MFG. CO.
MARLBORO, MASSACHUSETTS

Manufacturers' Announcements

(*Continued from page* 311)

maintained at 11 Mission Street, San Francisco, E. F. Coats, Manager; 528 Ceres Avenue, Los Angeles, W. E. Wilkinson, Manager; 819 S. W. Front Avenue, Portland, Oregon, Ray Van Marter, Manager; and 1822 7th Avenue, Seattle, Washington, J. H. Walton, Manager. Another branch is to be added shortly at Salt Lake City.

New Booklet on Fire Retardant Wood

The Wood Preserving Division of Koppers Company, Inc., Pittsburgh, Pa., has issued a new 12-page booklet on the subject of fire-retardant wood.

The booklet discusses "fire hazard" ratings of various building materials, the evolution of fire-retardant treatments, Underwriters' Laboratories tests of fire-retardant wood, and methods of treating wood to make it fire retardant, and lists applications in which fire-retardant wood is of special value.

It also contains information on, and pictures of, actual cases where fire, originating in inflammable materials, was held in check by the fire-retardant wood and pictures of burning tests and standard specifications for fire-retartant treatment with the new CZC (FR), developed by Koppers. For a copy write Koppers Company, Inc., Wood Preserving Division, Koppers Building, Pittsburgh 19, Pa.

New Marbelite Bulletin

The Marbelite Company, which is associated with the Atlas Safety Equipment Company, Inc., 27 Warren St., New York 7, N. Y., has just published its M-10 Bulletin, describing in detail its new Series M Traffic Controller.

The Bulletin contains eight pages of informative, illustrated data which should be in the file of every emergency service and traffic department.

Handy Pressure Chart

Many years ago, in answer to the need for a simple table that would enable firemen and pump operators to determine the correct engine pressures for effective hand line fire streams, Paul D. Kinney of the Sacramento Fire Department designed a tabular chart on metal plate that made quite a hit. Following its description in FIRE ENGINEERING, many fire departments put it to use.

The earlier plate, for mounting on apparatus, was perpendicular in shape, with white printing on a black background. The new plate, being marketed by the same supplier, under the name Paul D. Kinney & Son, has the same general characteristics, but is the more convenient horizontal shape.

The handy calculator, mounted alongside pump controls, enables a pump operator or fireman to instantly determine engine pressures, when certain basic data are known. The new plates are offered by Paul D. Kinney & Son, 3360 H Street, Sacramento, Cal., at $5.00.

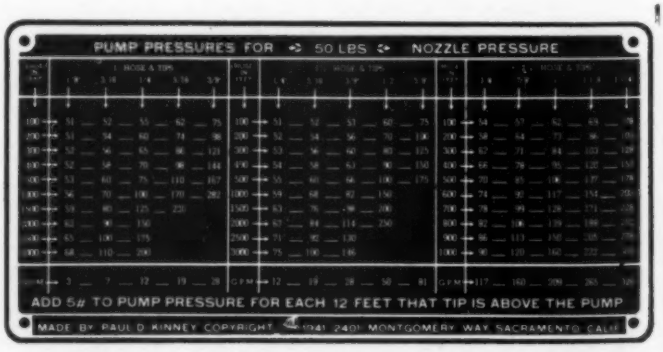
Rockwood Introduces Fog-Foam Nozzle

Rockwood Sprinkler Company has introduced its new Rockwood Type FFF FogFOAM Nozzle which is designed to provide greater extinguishing action on flammable liquid fires than has heretofore been possible with old style chemical and mechanical foam equipment. It

New Rockwood Type FFF FogFOAM Nozzle

is said that this is the first time such a nozzle, which was originally developed by the Rockwood Sprinkler Company for protection of naval aircraft carriers, against Japanese aerial attacks, has been made available to municipal departments, industrial plants, oil refineries, etc.

The Type FF Fog FOAM Nozzle comes in three sizes, for service on 1½ in., 2½ in. and 3½ in. hose. It is equipped with a FogFOAM screen that discharges a wide protective pattern of fog foam that can be applied directly to burning liquids. This screen can easily be removed and replaced with a foam-shaper, which will allow the nozzle to discharge a long-range, solid foam stream. With this same nozzle it is possible to shut off the foam liquid supply and obtain a good high velocity water-fog pattern.


PUMP PRESSURES FOR 50 LBS NOZZLE PRESSURE
ADD 5# TO PUMP PRESSURE FOR EACH 12 FEET THAT TIP IS ABOVE THE PUMP
MADE BY PAUL D. KINNEY COPYRIGHT 1941 2401 MONTGOMERY WAY SACRAMENTO CALIF

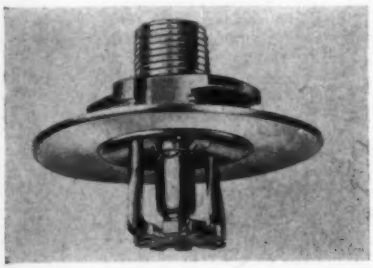
Kinney Pressure Data Plate for Mounting on Fire Apparatus

Rockwood FogFOAM is also available in the form of automatically operated and permanently piped systems.

The Company has just prepared a colorful bulletin illustrating this latest development for the fire service, which may be secured from Rockwood Sprinkler Company, 54 Harlow St., Worcester 5, Mass.

The Sprinkler Is Streamlined

Grinnell Company, Inc., of Providence, R. I., has announced a new product, the Grinnell quartzoid ceiling sprinkler, which goes a long way to remove an old prejudice against sprinklers held by some persons—that they



Grinnell Quartzoid Ceiling Sprinkler

are ugly and unsightly. Where appearance counts, the Grinnell quartzoid ceiling sprinkler, with its concealed piping, blends nicely with the decorative requirements of modern designers. It is a development of the Grinnell Research and Products Engineering Division.

Nothing but the deflector supported by its arms and the neat quartzoid bulb show below the smooth level of the ceiling. The narrow ring which closes the opening through the plaster can be brushed, chrome finished or painted, to be indistinguishable. It is claimed that the new deflector provides improved distribution and maximum effectiveness, the records showing that in more than 39 out of every 100 fires only one sprinkler has had to open to put out the fire.

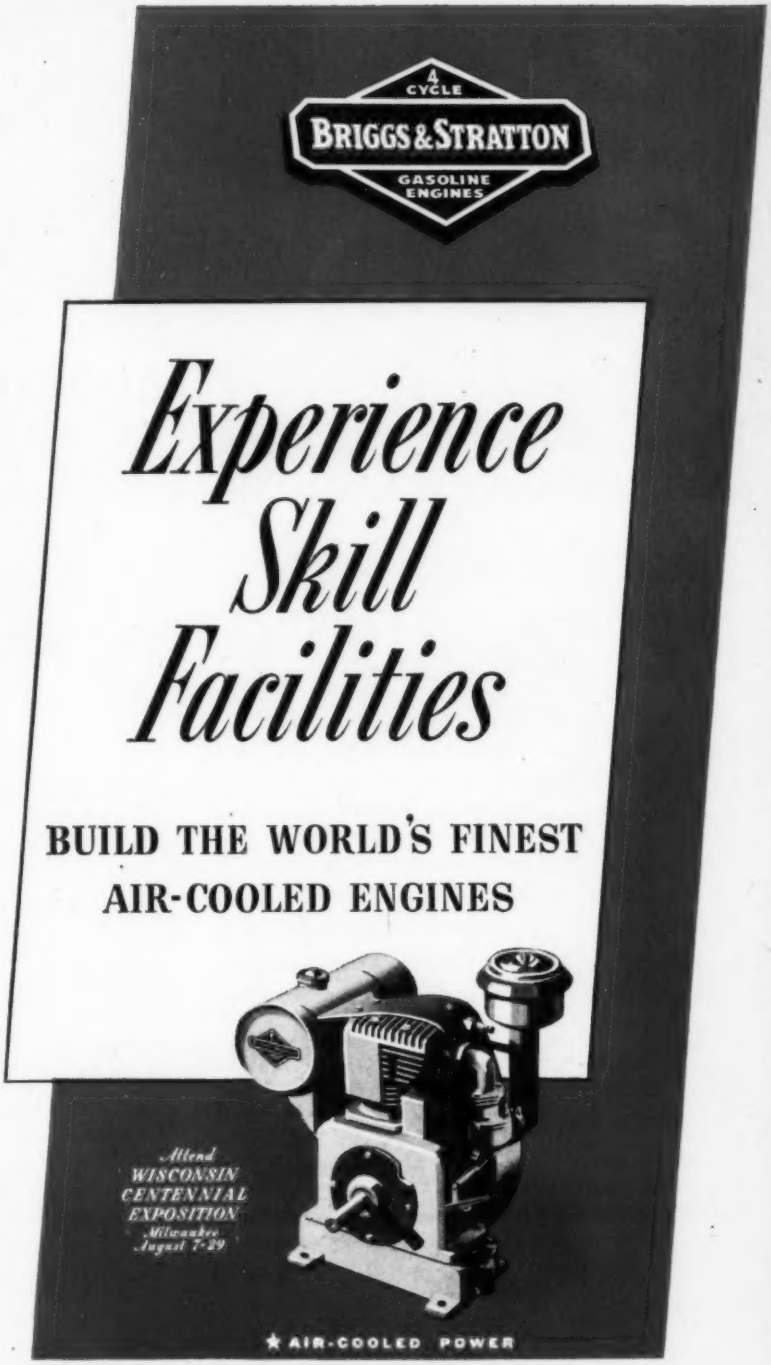
Temperature at the ceiling only has to reach 135 degrees F. to burst the quartzoid bulb, release the water and begin fire extinguishment. It is claimed this is 30 degrees F. lower than the rating for conventional fusible sprinklers and that efficiency on small fires is greatly increased by use of this new unit.

Bulletin on New Lightweight Pumps

A money-back guarantee of all-round pump performance is featured in the new Gorman-Rupp four-page colored Bulletin 7LW-13 which pictures and describes the characteristics, performance and uses of the new Gorman-Rupp lightweight centrifugal self-priming pumps.

The Gorman-Rupp guarantee covers quick and high priming, fast pumping and dependable operation. It features the improved Gorman-Rupp priming principle, developed by the company's engineers, and illustrates and describes also three new pumps, the Midget 1½-inch, the Hawk 2-inch and the Eagle 3-inch.

Bulletin No. 7LW-13 "Gorman-Rupp



Briggs & Stratton plants are equipped with the most modern machines, tools, and inspection facilities, designed for precision mass production. Operating this equipment are thousands of experienced and skilled men and women who take pride in their workmanship, and the part they have in building "The World's Finest Air-Cooled Gasoline Engines."

The record established by over 3½ million Briggs & Stratton engines, used in all parts of the world, is gratifying proof of their unequalled, built-in dependability.

When you specify Briggs & Stratton Air-Cooled Power, you are assured maximum engine performance year after year.

BRIGGS & STRATTON CORPORATION, Milwaukee 1, Wisconsin, U. S. A.

GOODALL
FIRE HOSE
COTTON RUBBER LINED
SINGLE OR DOUBLE JACKET

They All Add Up to
RELIABILITY

All requirements for fire hose can be summed up in that one word, **reliability** . . . the **certainty** that it has what it takes to back you up every minute of your fight against fire.

That's the **only** kind of fire hose Goodall makes. Every detail of its construction is based on years of hose-building experience and a first-hand knowledge of progressive fire-fighting requirements.

Contact Our Nearest Branch for Details and Prices.

GOODALL RUBBER CO., INC.
THE GOODALL-WHITEHEAD COMPANIES
MILLS and EXPORT DIVISION, TRENTON, N. J.—ESTABLISHED 1870
Branches: Philadelphia • New York • Boston • Pittsburgh • Chicago • St. Paul • Los Angeles
San Francisco • Seattle • Salt Lake City • Houston • Distributors in Other Principal Cities

HOWE Fire Truck Equipment to Meet Every Service
Established 1872
HOWE FIRE APPARATUS COMPANY, 1402 West 22nd Street, Anderson, Indiana

Self-Priming Centrifugal Lightweight Pumps" may be obtained by writing to the Gorman-Rupp Company, Mansfield, Ohio. It is the first of a series of bulletins describing the line of Gorman-Rupp centrifugal pumps.

Public Relations

(*Continued from page 297*)

"Attention Department: Sincere thanks and appreciation is hereby extended to all officers and members of the Fire Department who assisted in the distribution of informative literature and in other ways encouraged public support of the Fire Department Appropriation Bond Issue. Michael J. Corrigan."

The message was repeated on November 7 and 8.

Chief Fire Marshal Mullaney wrote a letter of gratitude to those groups which also played such an important role in securing the passage of the bond issue. The letter reported the overwhelming approval of the bond issue and thanked those who aided in securing passage of the measure. It was sent mainly to the groups which received the first letter requesting support.

New Equipment Ordered

Specifications for the desired apparatus were drawn up and have now been completed. Commissioner Corrigan hopes to place orders for 52 pieces of equipment including two fireboats, 35 pumpers, 12 hook and ladders, two fully-equipped rescue squads, two gasoline trucks, and one carbon truck with carbon dioxide equipment for duty at the airport.

The two new fireboats will take their place beside the city's lone fireboat, Fred A. Busse, in protecting Chicago's extensive river and lakefront. Many years ago the city had a number of fireboats in service but they have all been retired.

These new boats will be capable of discharging 10,000 gallons of water per minute at 175 pounds pump pressure. The new engines will be similar to the later models already in service and will be capable of delivering 1,000 gallons of water per minute at 150 pounds pump pressure. The 12 new trucks will carry 85-foot aerial ladders permanently mounted on the chassis.

One and one-half million dollars worth of modern fire apparatus for Chicago! And all obtained through public support of a just cause. A cause that was brought to light without one cent of the taxpayers' money being spent in publicity! A public relations program planned and executed by persons without previous knowledge of public relations methods and techniques.

Without a doubt the citizens of Chicago have been awakened to the fact that their ancient fire-fighting equipment is simply not up to the job of fighting modern conflagrations. Moreover, morale within the department has undoubtedly been strengthened. The men—from the Commissioner to the recruit—have been bound closer together by the knowledge that the public is ready, willing, and able to back them.

With these funds available it is hoped that a definite, planned program of apparatus replacement and retirement may be set up. As yet, however, no definite plans have been made for such an undertaking.

Status of Fire Service

(*Continued from page 299*)

tional authorities that men with minor disabilities and advanced age can displace trained firemen without seriously endangering the community. Attempt to convince those in authority that adequately qualifying a fireman for effective municipal fire fighting is a task much more complex than training men to fight ship and aircraft fires, especially.

14) Ascertain to what extent the curriculum of the military academies has been changed and to what extent the armed forces are now training future officers in fire prevention, fire fighting and related techniques. Also to what extent commissioned and non-commissioned personnel now in active service are receiving extensive training in fire-fighting techniques and fire-prevention practices, in order that they may meet the responsibilities which our military leaders state must be met in time of war, and also in order that fire experts and training officers will be available in numbers to train men who will be inducted in time of national emergency.

15) Recommend to national authorities a complete overhauling of the fire defense system. That system being one which traditionally grew up through necessity of providing some measure of fire protection to frontier military posts and forts, based essentially upon volunteer efforts of soldiers directed by traditionally military officers, reinforced in some cases, by civilian personnel. This hodgepodge system of fire protection works well only when there is no fire or when some strong personality is able to bring order out of chaos.

In its place, a Corps of Military Fire Fighters, similar in scope to the Corps of Military Police, might be proposed. If such a Corps were established before the next war, it could be entrusted with the problem of procuring the necessary apparatus and equipment and providing standards for manufacturers to use in making it. Fire fighters could be trained for use in all theatres of operation and if any continental city were threatened by imminent attack, units of the Corps could be dispatched to reinforce the municipal fire department to the extent considered necessary.

This proposal of a large fire-fighting corps might well apply to the Navy also. Fire-fighting squadrons as protection for task forces and naval installations are not beyond the realm of feasibility in contemplating fire defense possibilities in any future conflict.

Newark Fire

(*Continued from page 301*)

alarm was received, was informed of the blaze and that a third alarm was in. The Chief, in civilian clothes, flagged down a piece of departmental apparatus which was responding on the multiple alarms, and assumed command upon his arrival at the fire and at 4:15 P.M. he ordered a fourth alarm sounded. After a comprehensive size-up and determination of the possibilities for further extension of the blaze, he ordered the fifth alarm (4:39 P.M.).

Considerable concern was felt over the two 10,000-gallon railway tank cars located directly in front of the fire building on the double-track siding. At

POWHATAN

NOZZLES
PLAYPIPES
HOSE PLUGS
HOSE NIPPLES
HOSE CAPS
STRAINERS
SUCTION COUPLINGS
PLAIN HOSE PIPES
ANGLE HOSE VALVES

IT takes experience to make good fire protection equipment. We have 56 years of it.

It takes precision manufacture. We are fully equipped and geared for it.

It takes quality material. We use nothing but the best.

These are only a few reasons why Powhatan products are preferred the country over by Fire Chiefs who believe in having nothing but the best.

Our line includes a wide variety of standard appliances to meet practically any fire protection requirement.

ADAPTORS
REDUCERS
SIAMESE
GATE VALVES
SPANNERS
HOSE EXPANDERS
HOSE COUPLINGS
HYDRANT VALVES
EXPANSION RINGS

Whatever your needs, see the Powhatan line before you buy. We welcome your inquiries.

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia
Established 1892

the outset, these cars were obscured from view of firemen by the dense smoke and flame. Firemen were not aware of the contents of the cars, nor did they know whether they were full or empty. Nevertheless, as soon as possible after their location was disclosed, streams from deluge sets were concentrated on them in the effort to prevent their rupturing.

The fire fighters were successful in this operation and after the fire was extinguished it was found that one of these cars had just been emptied and the other one was full of naphthalene. According to Charles Hayes, Superintendent of the plant, the loss to the full car of naphthalene was negligible although both cars suffered considerable damage from the intense heat.

With the arrival of the fourth and fifth alarm companies, additional heavy streams were placed in operation and it was not long before their effect told on the fire. By about 5:30 P.M., firemen had control of the blaze and some of the companies were released. Chief Burnett, however, ordered all members of outgoing crews to remain on duty until further orders, to supplement the manpower in the remaining companies in service. At 7:00 P.M. this order was cancelled. Department operations at the fire were not concluded until 5:00 P.M., on Sunday, April 11, 1948, at which time all lines were removed from the scene.

Two Firemen Injured

Fortunately, despite the magnitude of the operations and the hazard of explosions, falling walls and high tension lines, only two firemen were injured. They were Lowell Klatt, Ladder 4, who was struck by part of a falling rear wall of the plant and sustained injuries to his back and an arm, and Michael Stracks of the same command, who fell into the hot oil floating on the surface of the water and received first degree burns on the face and hands. Both Firemen were removed to St. James Hospital, where they were treated, and later released.

Heavy Mobilization of Fire Forces

There were in operation at the fire 15 1,000-gallon pumping engines; two fireboats; one crash-truck-tank unit; one rescue squad; one searchlight; five ladder trucks (all aerial); the Chief of Department, Acting Chief of Department, one Deputy Chief, and two Battalion Chiefs; the Superintendent of Maintenance, Physicians and Chaplains, and also department mechanics and telegraph crews.

Thirty-three (33) 2½-in. lines were laid. There were in action, four deluge nozzles; one deck pipe; 21 hand-lines equipped with 1⅛-in and 1¼-in tips. Two 1½-in. lines were used by Engine 35. Ladders raised totalled 98-ft.

In all, 350 lengths, or 17,500 feet, of 2½-in. hose were in service as well as 500 ft. of 1½-in. hose. The combined engine duty performed was 77 hours.

The chronology of response was as follows:

3:44 P.M. First alarm—Engines 16, 8, 5, 32, 35; Ladders 8, 2; Fireboat E 31; Rescue Squad E 34; Batt. 5, Dep. 2.

3:49 P.M. Second alarm—Engines 14, 2, 3, 4; Ladder 1; Searchlight E 37; Chief of Dept.; Batt. 1.

3:51 P.M. Third alarm—Engines 22, 10, 20; Ladder 4.

4:15 P.M. Fourth alarm—Engines 7, 12.

4:39 P.M.—Fifth alarm—Engines 15, 23.

Losses Held to $100,000

As is often the case with fires entailing such hazards, and extensive fire department operations, the actual losses do not indicate the magnitude of the fire, or its potentialities for widespread destruction. Actual monetary loss was approximately $100,000, mostly to the processing plant, which was levelled. Elsewhere, damages were held to the minimum.

The fire illustrated the great value of radio communications on fire department mobile units. Additional alarms, as explained, were transmitted without loss of time; radio also aided in placing departmental units, cutting off dangerous electrical power and in handling the vast crowd of spectators, attracted by the column of black smoke and the excitement attendant upon the response of the many units of apparatus, and the newscasting of the fire, over commercial radio broadcast stations. A number of fire buffs from New York City's Fire Bell Club, as well as the 7-7 club and other organizations responded, as did fire fans and buffs from Newark and other places in New Jersey.

Fourth Major Fire at Plant

The fire was the fourth multiple-alarm fire at the plant since 1939. In April, 1946, firemen fought a two-alarm

No. 930 Junior Type Roto-Rays

No. 931
Large Type Apparatus Roto-Rays

SEEING IS BELIEVING!

And these powerful Buckeye signals leave no doubt in the minds of pedestrians and motorists that official vehicles are on the way!

The revolving red lights of the Roto-Rays cut through the glare of street lights, giving the exact location of your apparatus and the direction in which it is traveling.

Likewise, the Buckeye Moto-Ray provides positive identification of emergency vehicles by day or night, throwing its strong red beam from left to right 40 times a minute.

No. 950 Moto-Ray

Buckeye
FIRE DEPARTMENT ACCESSORIES
BUCKEYE IRON AND BRASS WORKS • DEPARTMENT E
P. O. BOX 883, DAYTON 1, OHIO

blaze in a pitch house and on November 5, 1942, a four-alarm fire broke out in a building used for refining and flaking naphthalene. A one-and-one-half story building at the plant was damaged in a three-alarm fire March 7, 1939.

There have been two explosions at the plant, the more serious on June 17, 1935, when a rear section of a 10,000-gallon still used to melt tar was blown out. The other explosion occurred in March, 1934.

The efficient work of the Newark Fire Department was highly commended by John B. Keenan, Director of Public Safety and other city officials.

Aluminum and Magnesium Blast

(*Continued from page* 304)

sooner the fire is attacked the less molten magnesium will have had time to form. Accumulations of water on the floor or ground under burning magnesium would increase the explosion hazard from dropping molten magnesium.

"The severity of any resulting explosion may be lessened by providing as much vent area as possible, as by opening windows, doors and skylights and by opening up roofs if necessary.

"Before attacking a large magnesium fire with hose streams, the situation should be sized up carefully. The amounts and kinds of magnesium, the condition of storage, the building construction, the character of exposures, as well as the character and extent of the fire will be among the factors to be considered in deciding upon a course of action to bring the fire under control."

N. Y. Court Rules on Veteran Job Preference

The N. Y. Court of Appeals ruled April 22 in a 4-to-3 decision that war veterans must have a Veterans Administration disability rating of 10 per cent or more to be eligible for preference in civil service appointments under the 1945 veterans' preference amendment to the New York State Constitution.

The decision will affect all disabled veterans seeking civil service appointments or promotions in the state and, in addition, those already permanently appointed, it was said (in the last year 330 disabled veterans received permanent preference appointments in the state's service).

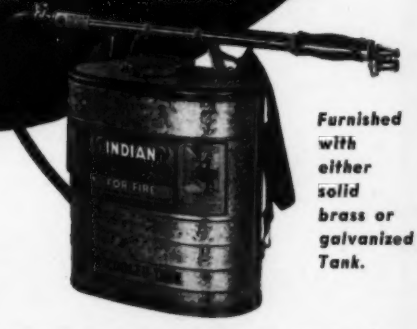
The court's decision was in a proceeding begun by three New York City non-veteran firemen who became eligible for promotion to lieutenant by passing a competitive examination. They alleged that while their ratings were based on merit and fitness, some 200 other candidates had received veterans' preference, despite a lower rating.

Back Copies Available

W. C. Thrun, of 7216 Sheridan Road, Kenosha, Wis., who recently retired from the Fire Department of Batavia, Ill., has on hand a complete set of copies of FIRE ENGINEERING from April, 1935, to date. Anyone interested in securing this set may communicate directly with Mr. Thrun at the above address.

and there is ONLY ONE

INDIAN FIRE PUMP



Furnished with either solid brass or galvanized Tank.

"I can't imagine what we would have done without our INDIAN FIRE PUMPS!" That comment is repeated over and over again by men who have seen these two fisted fire fighters go into action. They know that when it comes to knocking out a blaze in a hurry INDIANS have no equal.

You, too, can solve your fire protection problems with INDIAN FIRE PUMPS. Clear water does the job—or use wetting agents if you prefer. Send for catalog—it tells everything you want to know about these famous extinguishers.

D. B. SMITH & CO.

406 Main Street UTICA 2, N. Y.

PACIFIC COAST BRANCHES

Hercules Equipment & Rubber Co. 635 Brannan St. San Francisco, Calif.

Roy G. Davis Co. 617 East 3rd Street Los Angeles 13, Calif.

Mill & Mine Supply Co. 2700 Fourth Ave. Seattle, Wash.

Fred E. Barnett Co. Klamath Falls, Oregon

Fred E. Barnett Co. 2005 S. E. 8th Ave. Portland, Oregon

CANADIAN AGENTS

Bingham & Hobbs Equip. Co. 395 W. 5th Ave. Vancouver, Canada

Duke Equipment Co. 297 Duke St. Montreal 5, Canada

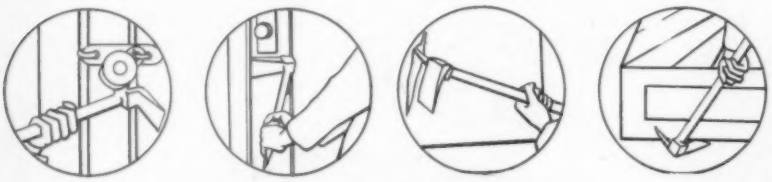
"The HALLIGAN TOOL"

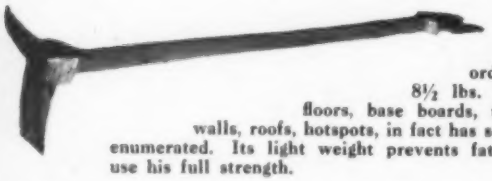
DOES EVERYTHING—EASILY AND WELL.

THE PERFECT FIRE-TOOL.

NO RUNNING BACK FOR A NECESSARY TOOL.

THE PROPER TOOL IS ALWAYS PRESENT.





Here is a forcible entry tool that takes the place of ten ordinary fire tools, yet weighs only 8½ lbs. Can be used on doors, locks, floors, base boards, trim, molding, window frames, walls, roofs, hotspots, in fact has so many uses that they cannot be enumerated. Its light weight prevents fatigue and enables a fireman to use his full strength.

Chief Charles J. Friedel, Department of Public Safety, Bureau of Fire, Union City N. J., reports:

"We have been using these tools on the Emergency Squad and a Truck Company and have found them to be the best all around tool in the fire service. I readily recommend them to any Fire Department or Emergency Squad requirements."

HALLIGAN TOOL CO., 1505 Metropolitan Ave., N. Y. 62, N. Y.

SEALAND BUILDS THEM TO LAST!

Here is an actual performance record! **This engine has seen tough service since 1937 . . . even during severest northern New England winters. Sealand equipment really stands up. Submit your specifications to Sealand and get the best . . . designed for your specific needs.**

HANCOCK VERMONT Built in 1937

. . . and still going strong. Standard 500-gallon pumper, built on standard commercial chassis.

THE SEALAND CORPORATION

SOUTHPORT • CONNECTICUT

Builders of RUGGED FIRE FIGHTING EQUIPMENT and DEPENDABLE FIRE ALARM SYSTEMS

Bursting Hot Water Tank Wrecks Store

The accompanying illustration shows wreckage in the Little Canary Cottage sandwich shop, corner Church and Fourth streets, Charlotte, N. C., with Charlotte firemen inspecting. A hot water heater, to which the light had not been turned off when the shop closed at 7 p.m. on Feb. 26, caused the tank to blow up at 9:45 p.m. Owner-Operator Henry

Wreckage Caused by Hot Water Tank Which Burst at Charlotte, N. C.

B. Benoit, Jr., is wondering if his fire insurance policies cover this type of loss. No one was hurt, as everybody had gone home when the shop closed at 7. But the wreckage of the building was extensive, as the photo shows. It was the second explosion in a cafe on South Church street. Some weeks ago a placed bomb exploded in the Rendezvous cafe, killing one person and injuring several others, besides wrecking the place.

D. G. SPENCER.

March Fire Losses

Fire raged on to destroy $74,236,000 in property and resources during the month of March, according to estimates announced by the National Board of Fire Underwriters, bringing a total of $208,767,000 the fire loss in the United States for the first three months of 1948.

The March fire loss is an increase of 2.49 per cent over March, 1947, a year ago, and 3.8 per cent more than February, 1948, the previous month.

Over the past 12 months the destruction by fire has reached a total of $707,540,000 with the inclusion of the March figure, again hitting a new peak for fire waste in any 12 months period as reported by the National Board of Fire Underwriters.

This figure exceeds by $14,905,000 the fire losses of $692,635,000 for the year 1947, the highest annual loss for any calendar year thus far reported. The addition of the March figure brings the daily destruction in property and scarce commodities in 1948 to the staggering sum of $2,295,022.

These estimated losses under fire insurance policies are on an incurred basis, including an allowance for unreported and uninsured losses.

Indianapolis Installs Radio

The retirement of Chief Harry Fulmer as head of the Indianapolis Fire Department (December FIRE ENGINEERING) was marked as his last official act, by the inauguration of the fire department's new FM two-way Motorola radiotelephone communication system.

Retiring Chief Harry Fulmer Inaugurates the New Two-Way Radiotelephone Fire Communicating System at Indianapolis. Looking on Are Incoming Chief Roscoe A. McKinney and Mayor-Elect Al. Feeney

While present and future city officials looked on at the City Hall, December 30th, Chief Fulmer, with the aid of a tiny fire axe, cut a ribbon covering the remote control console in the fire signal center at City Hall and dispatched the first radio messages to Indianapolis firemen.

The ceremonies were preceded by the last meeting of the old Safety Board, during which the outgoing Chief received the acclaim of William H. Remy, Board President, and other members of the administration.

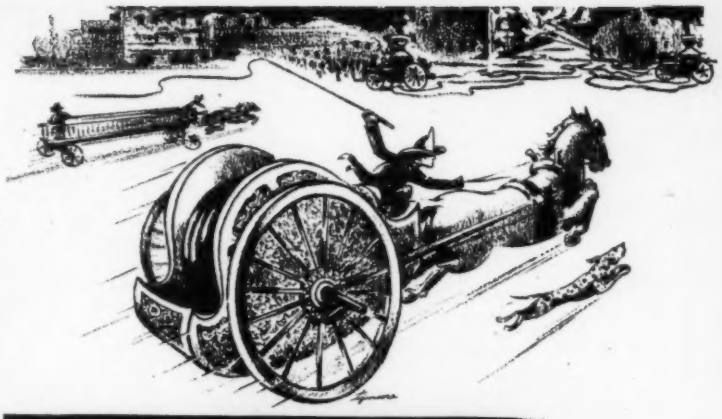
The new communications system was in full operation by mid-January and it is said to be one of the most modern and complete systems in the country. Much of the equipment was specially built to specifications laid down by Captain Bob Batts of the Indianapolis Police.

The Indianapolis fire communications system, though operating independently, will be maintained by a newly created city Radio Division, combining both the fire and police systems under Captain Batts' department. Combining both systems under one head is calculated to save the city over $100,000 the first year of operation, and approximately $40,000 a year thereafter.

Long Barn, Calif., Organizes Fire Department

The community of Long Barn, Cal., near Sonora, is organizing a fire department and will purchase apparatus, equipment and fire hydrants. The fire commissioners are Sam Keirns, Herman Bauman and Bill Johnson.

—VICTOR P. BARTLEY



FIREFIGHTING TODAY IS DIFFERENT!

Shuredry

IS ON THE JOB

In the days of the horse-drawn hose cart, damage from smoke and water was often greater than the actual fire loss, but times and techniques . . . as well as equipment . . . have improved. Shuredry Green-Bak Salvage Covers are standard equipment for trained salvage crews who save fire victims millions of dollars each year in salvage of merchandise, furniture and fixtures.

FULTON Shuredry GREEN-BAK SALVAGE COVERS

they Top every test

Shuredry Green-Bak Salvage Covers top every test for water penetration and seepage. Pressure-impregnated with the exclusive Fulton *dry* treatment, Shuredry covers will not stiffen in cold weather or become tacky in heat. They're always fast to spread . . . easy to fold and carry.

Approved **Factory Mutual Laboratories and National Board of Fire Underwriters**

FIREMEN'S ASSOCIATIONS TEACH WITH SHUREDRY

Many progressive associations use Green-Bak Shuredry Covers to teach modern methods of salvage to smaller departments in their state.

On your next order to your fire equipment dealer specify Shuredry Green-Bak Salvage Covers.

FULTON BAG & COTTON MILLS
Manufacturers Since 1870
New Orleans, Denver, St. Louis, Atlanta, Dallas, Minneapolis, Kansas City, Kans., New York

OREN

FIRE APPARATUS

BUILT IN POPULAR CAPACITIES AND TYPES TO FIT YOUR OWN REQUIREMENTS ON COMMERCIAL OR SPECIAL FIRE CHASSIS

OREN ROANOKE CORP.
ROANOKE 16, VIRGINIA

6 IMPORTANT FEATURES

with FYR-FYTER'S
Loaded Stream Extinguisher—
the INSTANT

1. Fast action on both class A & B fires.
2. Anti-freeze to —40° F.
3. Kills fire faster—retards reignition.
4. Easy to operate (invert, tap plunger).
5. No annual recharge needed—weight inspection only.
6. Throws a long stream.

Write for descriptive literature today.

THE FYR-FYTER COMPANY
DEPT. 101-41, DAYTON 1, OHIO

LITERATURE AVAILABLE ON ALL FYR-FYTER MODELS

Fyr-Fyter ENGINES | Fyr-Fyter PUMP TANK | Fyr-Fyter FOAM | Fyr-Fyter CO_2 | Fyr-Fyter SODA-ACID | Fyr-Fyter VAPORIZING LIQUID

Correspondence

Radio Pays Its Way

To the Editor:

Early in January, 1948, Engine 40 of the Los Angeles County Fire Department was equipped with two-way radio, one of the first few in the department. In the opinion of the men in this company, it has already paid for itself in helping control a fire in an oil derrick valued at $32,000 and keeping the loss down to $10,000.

On Saturday, January 24, Engines 4 and 40 were dispatched to a reported oil derrick fire at the intersection of two busy boulevards and a bridge over the Rio Hondo River. Captain Kenneth Oker of Engine 40 was the first to come within sight of the fire and, while still half a mile distant, sent in a call for Engine 15 and traffic control assistance. Both Engine 15 and the Sheriff's and State Highway Patrol cars were dispatched and on their way before Engine 4 and 40 had their lines laid. All arrived in short order.

Engines 4 and 15 both had to lay across the bridge and this artery had to be closed. After the fire in the ground works and the lower portion of the derrick was controlled it was necessary to relay a line from each pumper across the river into Engine 40 and thereby gain enough pressure to reach the top of the derrick with a stream from a 1⅛-in. nozzle.

If it had been necessary to send a man to the only available phone in the area, the delayed response of Engine 15 might have resulted in the loss of the derrick; traffic also would have been a severe handicap without the police force being there so quickly.

Engine 40 is the only rig equipped with radio at present in the San Gabriel Valley District although several other county units have radio and within a short time, all units of the Los Angeles County Fire Department will be so equipped.

T. W. Showers
Pico, Calif.

Mechanical Foam

To the Editor:

In the Question and Answer column on page 46 of the January issue of Fire Engineering, there is a reply to a question by NRW which I think merits a slight correction. It concerns the use of mechanical foam.

A protein base foam liquid, which is commonly known as the low expansion type, normally produces an expansion of 8 to 12. The synthetic base liquid, known as high expansion, normally produces an expansion of 16 to 20. Whether a back pack or hip pack carrier is used should have no influence on the expansion. The Navy standardized on the protein type and has been widely used by them on shipboard and for airplane crash truck use. The usual proportioning of this liquid, however, is six gallons per 94 gallons of water to give a 6% solution instead of the 3% which you state. Although several companies have, on an experimental basis, liquid to be used in a 3% concentration, it is not widely used and all present day nozzles are constructed so as to pick up the proper amounts of liquid to make a 6% solution with water. British equipment, how-

ever, is set up for a 3% basis, at present.

I admit this is a relatively small matter, but I believe the record should be kept straight.

Very truly yours,
H. B. PETERSON
Chemical Engineer
Engineering Research Section
Chemistry Division
Naval Research Laboratory
Washington 20, D. C.

Annual Reports Received

Meredith, N. H., Golden Jubilee Year Book

An attractive plastic-bound book celebrates the Meredith, N. H., Fire Department's Golden Jubilee. It is at the same time a year-book, detailing the history, organization and operations of the "M.F.D." The Fire Department consists of Wamesit Hose Companies No. 1 and 2 and Wamesit Hook & Ladder Co. No. 1. The department hopes to have a new fire station in the not too-distant future.

* * *

Northwestern Ohio Volunteer Firemen's Association Year Book

Contains information about the Association, and its 71st and 72nd Annual Conventions held in Ashland, Ohio, and Napoleon, Ohio, respectively. The Association includes representatives of 158 cities and towns in its membership.

* * *

Sacramento Fire Prevention Manual

Orchids to the Sacramento Fire Department for its 40-page "Fire Prevention Manual" issued "to promote the public awarenes of fire prevention and fire protection, to encourage mutual cooperation between the Fire Department and the Public, and as an educational medium to help reduce fire hazards and fire losses." While it deals in the fundamentals of fire prevention, it tells much about the fire department, its problems and operations. It is "written" by almost all the officers and heads of divisions of the department, of which popular Terence Mulligan is Chief.

* * *

Illinois State Reports

The Thirtieth Annual Report of the Division of Fire Prevention, Department of Public Safety, State of Illinois (June 1, 1946 to June 30, 1947) contains a wealth of statistical information. It was prepared under the supervision of T. P. Sullivan, Director of Public Safety, John H. Craig, Fire Marshal and George H. Anderson, Asst. Fire Marshal. Losses in the State in 1947 hit an all-time high, with 17,315 fires reported outside the City of Chicago. Total loss was $19,251,630.

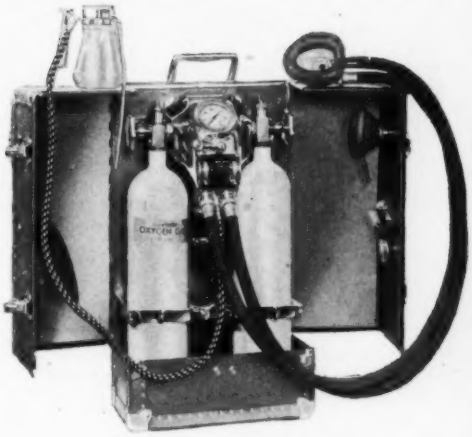
* * *

Everett, Wash., Fire Dept. Annual Report

Although mimeographed, in tablet form, the 1947 Annual Report of the Everett Fire Department, F. F. Schroeder, Chief, provides an excellent factual picture of the department's organization operations, condition of apparatus, etc. Chief Schroeder recommends adding a new triple combination pumper, a fire prevention ordinance and new building to house the Fire Alarm Central Office and Fire and Police Signal Repair Shop.

THE STEPHENSON RESUSCITATOR

YOUR FIRST THOUGHT IN LIFE-SAVING



Because-

You can now, for the first time, lower operating pressures when you encounter an injured chest, third degree burns, or a small, blue born baby.

You can now mix air with oxygen as the patient recovers. This is good for the patient and saves the oxygen.

Write today for literature or for a demonstration.

STEPHENSON CORPORATION
RED BANK, NEW JERSEY

SPECIAL! WATER FOG NOZZLES

UNUSED GOV'T SURPLUS

1½" Solid Brass—3-Way Action—Steady Stream—High or Low Velocity Fog. Top Brands. Perfect Condition. Specify I.P.T. or N.S.T. Other Threads Extra.

$13.50 Complete Set

Complete with 6-ft. Extension Applicator and Fog Tips. Priced at a Fraction of Normal Replacement. Nozzle with 10-ft. Applicator Set @ $14.50. Also 2½" N.S.T. Fog Nozzles, Brass, with 12' Applicator Set—$19.50 each.

HALPRIN SUPPLY CO., 837 East 4th Place, Los Angeles 13, Calif.

BRAXMAR BADGES

Standard with firemen for 67 years. We can now supply nickel and chrome badges.

John O. Veit, Pres.

C. G. BRAXMAR CO., Inc.
242 W. 55 Street, New York 19, N. Y.

STILL THE ACKNOWLEDGED LEADER IN THE FIELD

CAIRNS

REGULATION 8-COMB LEATHER HELMET

No fireman's headgear ever devised equals it for protection, comfort, durability and long-run economy.

Write for NEW Catalog No. 331, describing this and other CAIRNS HELMETS, as well as clothing, caps, rubber goods, record forms, and other department needs.

CAIRNS & BROTHER
Outfitters to Firemen Since 1836
(ALLWOOD), CLIFTON, N. J.

The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

THE USE AND ABUSE OF THE FIRE CHIEF'S CAR

THE discussion in this Round Table is a continuation of that which appeared in the March and April issues of FIRE ENGINEERING on the use of the fire chief's car.

The generous response from our readers made it necessary to carry the discussion over to this issue.

Readers are invited to send in their comments on this subject. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Topic

The Hon. N. K. Buck, Mayor, Yakima, Wash.: I volunteered to answer your letter addressed to Chief Moore, as both the chief and I thought you might appreciate a letter from the mayor even more than you would one from the chief.

I answer your inquiries as follows, and these answers are in accord with our practice:

We believe that the fire chief should be supplied with a car, and that it should be available at all times, even when he is not on duty. As long as he is expected to respond at all times if he is needed, he should be supplied with this means of transportation.

We think he should be allowed to keep his car at home and to use it going to and coming from his work. The reason for this is about the same as indicated in answer No. 1. In this respect he is not like other employees of the city who have duties to perform only during certain hours of the day, and we think that all such employees should supply their own means of transportation going to and coming from work.

We do not think the chief should be allowed the use of the car on days on which he is not on duty, and in view of the answer above, we think the reason for this is clear. If he is not expected to respond to calls he has no reason for having a city car.

I do not quite understand your fourth question. If it were put the other way around I think I would know what is meant; that is, if the inquiry was as to what restrictions we put upon the chief's use of the city car for his own business, I could understand it, but as long as we allow him to keep his car with him at all times whether he is occupied with his own or city affairs, this question seems to have been answered above.

E. J. Bandgren, Chief, Muskegon, Mich.: The Fire Chief should be provided with a car for departmental business, as he is subject to call at all times in cases of emergency.

I see no reason why he should keep this car at home for transportation to and from work, if he lives a reasonable distance from Fire Headquarters. A public car standing in front of a private residence day after day does not set a very good example for other City employees, also the taxpayers resent this to a certain degree. Let me quote two sections of our Fire Department Ordinance which I think covers the reasons why he should have a car and also a driver assigned to drive him.

"Article 2, Section 5. The driver of the Fire Chief's car shall be considered his aid, all orders received by the company officers from these aids shall be accompanied by the statement that they are being relayed from the Chief. When this is done, the officer shall carry out the orders as if coming directly from the Chief himself. Drivers are specifically prohibited from giving orders not authorized by the Chief."

With two-way radio and a driver assigned to the Chief's car, he is always in touch with Fire Headquarters and other governmental units.

"Article 1, Section 17. All automobiles and Fire apparatus used by the Fire Department and belonging to the City of Muskegon must be painted the regulation color and initialed M. F. D."

This, I think, is only right, and the

HERE IS THE QUESTION

1. **Do you believe the Fire Chief should be provided a car to be used for department business and at all other times, so that he may quickly respond when emergency arises?**
2. **Should he be permitted to keep his car at home, for his transportation to and from work, and to be used in the event of alarms? Why?**
3. **Should he be permitted the use of this car on days off? Why?**
4. **What restrictions, if any, have you which curb the Fire Chief in the use of his private automobile for departmental business?**

Chief should not object to this procedure, it not only designates his authority, but tends to promote better public relations.

On the matter of being permitted the use of this car on his days off, I do not think any Chief wants to take a red car to church or to a public park, etc. If he is assigned a driver and Fire Headquarters is advised as to where he can be reached in emergencies, this problem is very easily solved.

Regarding restrictions on use of Fire Chief's private automobile for departmental business. Here in Muskegon, he is not expected to use his personal car for Fire Department business.

In this day of two-way radio, fire alarms installed in the Fire Chief's home, besides telephone service, and a driver assigned to drive the Chief, he is practically available at all times, whether he is covering routine Fire Department business, at home to his meals, or out in the field on some Fire prevention matter.

At times when the Chief is out of town at conferences or on vacation, his deputy or assistant will automatically carry on in the manner described above.

Lucius B. Smith, Chief, Billings, Mont.: I believe the fire chief should be provided with a car to be used for departmental business and at all other times.

I believe he should be permitted to keep the car at home so that in case of emergency he can respond to alarms with greater safety and with the use of his radio he can better direct the fire companies.

I believe the chief should be in possession of a city-owned car at all times when in the city. In our city the chief is on duty all the time he is within the city limits. His fire fighting clothes and equipment are carried in his car. Without it he would be unprepared to perform fully his duties.

There are no restrictions curbing the use of a chief's private automobile. For years the city has furnished a car for the chief. This has proven to be a more satisfactory arrangement than a privately owned car.

John T. Shelley, Chief, Calgary, Alta.: I believe the fire chief should be supplied with a car for fire department business only. This car should be kept at home as it would be handier and quicker should he be called out to an alarm. Time would be wasted if he had to wait for his car to be dispatched to pick him up.

I do not believe, however, that he should use the city's car for his own use. There are no restrictions on the use of the chief's personal car. If he wants to use his own car, it is entirely up to him.

Bernard J. Padgett, Chief, Alexandria, Va.: I believe the fire chief should be provided with a car to be used for department business and at all other times so that he may respond when an emergency arises.

I believe he should be permitted to keep this car at home.

When a fire chief is in town, I believe he should attend fires at his own discretion or be governed by the rules of the department. I have often received alarms over the radio while going home or to my office. However,

TO KEEP IN STEP . . .

Specify HALE

FIRE PUMPS HALE CONSHOHOCKEN PA

Quite often Fire Companies write in asking to have their Hale Pumps removed from old apparatus and installed in a new chassis — pumps that have given consistently dependable service for 15 to 24 years and that are still in excellent condition.

We appreciate the compliment . . . but the idea is not sound. Why? Because increased engine speeds and much greater horspower make it exceedingly impractical to hook up a 1924 pump with a 1948 engine.

The proper solution is to specify one of the current model Hale Pumps thoroughly in step with modern engines.

● *Fire pumps in all standard capacities.*

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.

US UNITED STATES MOTORS CORP. 430 Nebraska St. OSHKOSH, WIS.

LATEST FACTS ON GAS MASK PROTECTION FOR FIRE FIGHTERS

Now yours for the asking—new illustrated bulletins describing up-to-the-minute equipment developed by Acme engineers for fire department use.

Write today for factual information on "protection you can see through."

ACME
PROTECTION EQUIPMENT COMPANY
3037 West Lake Street • Chicago 12, Ill.

In the Fire Service—
THERE'S NOTHING "JUST AS GOOD"

The fire service prides itself on buying "the best," everytime. *INSIST on ATLAS*—everytime—and you'll get the *best* life net!

ATLAS LIFE NETS

ATLAS SAFETY EQUIPMENT CO. INC.
27 WARREN ST. NEW YORK 7, N. Y.

if a city can afford a driver for the chief's car, this may alter the situation.

He should be permitted the use of the car on his days off if he is in the city or close by. If there is more than one alarm, he will have to go to the fire and take over. I do not believe the car should leave the city except on city business.

The only restriction that I would encounter with my private car is not receiving the right of way by officers of the law and not getting the car to the scene of the fire. I would not use my car continuously because of the operating cost. Cities never give an adequate allowance to cover the cost of operating it.

John A. Laughlin, Chief, East Providence, R. I.: I believe the fire chief should definitely be provided with a car to be used for department business.

Where a chief has an aid or chauffeur, there seldom arises any problem for storage of the car. In any case, however, I believe that the car should be at the disposal of the chief at all times. There are very few chiefs, who upon learning of an emergency in their community, would not immediately return home as soon as possible. With their department car on hand, much valuable time would be saved. It is also more economical for distances of a few hundred miles to use the department car than over regular established transportation lines.

There are no restrictions on the department car, and naturally no restrictions on my personal car.

T. C. Hickson, Chief, Dubuque, Ia.: The chief should be provided with a car for department business if he must answer all alarms and drive the car himself.

I don't believe he should park the car at his home if he doesn't have to answer all alarms and has a driver.

I am not in favor of a chief using the city car on his day off. It is city property and if he is off duty he is not subject to call. I don't believe the city car should be used for pleasure. However, I don't believe the average chief gets time off except when he is on vacation. Schools and conferences attended by the chief do not constitute days off to my way of thinking, and in that case he should be allowed the use of the car.

It is my understanding that the state law governs the use of the chief's private car. A private car is not an emergency piece of equipment, and in case of accident would not have the protection of state law governing emergency equipment.

Fred A. Pudvan, Chief, Ecorse, Mich.: I believe a fire chief should be provided with a car for all department business.

In departments where fire chiefs have no chauffeurs, he should be permitted to keep his car at home, providing he restricts its use to department business and has the proper facilities for caring for a car. Fire chiefs' cars are properly equipped with sirens, lights, etc., which his personal car does not have.

I believe the use of a chief's car should be confined to department business only.

The use of the chief's private car hinders fast transportation in answer-

PROTECT YOUR EQUIPMENT AND PERSONNEL

Flash 'N Wag

Flashing, oscillating WIG - WAG Redhead beam quickly clears the way, sending powerful warning signals 1,000 feet ahead. Visible for miles.

Safer, faster, quieter runs. 6" and 8" diameter sizes. Write for Folder.

CARPENTER MFG. CO.
200 Master-Light Bldg.
BOSTON-45-SOMERVILLE
MASSACHUSETTS

BAR-WAY HOSE COUPLINGS
U. S. PATENT 2367447
for
HIGH PRESSURE FOG *lines*
Approved By
UNDERWRITERS LABORATORIES

Streamlined
Full Flow
High Pressure
Accurately Machined
Internal Expansion
Remountable

"ON THE ENDS—IN THE END"
IT'S BAR-WAYS

BAR-WAY MFG. CO.
STAMFORD • CONNECTICUT

HERE IS THE QUESTION FOR THE NEXT ISSUE

1. Do you believe the use of service stripes, or bands, on firemen's uniforms, to indicate their period of service in the department, would be a desirable plan?
2. In which ways, in your opinion, would they prove of benefit to the department or its personnel?
3. Do your men already wear them?

ing emergency alarms; also the car is not properly equipped.

B. H. Brown, Chief, Macon, Ga.: A fire chief should be furnished a car for department business or emergencies. He should also have a regular driver who works the same hours and who is available to drive the chief's car wherever he deems necessary.

He should not keep his car at home, unless it is his personal car maintained by agreed financial allotment by the city he represents.

He should be permitted to use the car for fire department business at any time. On his days off he may have opportunity to visit fire departments in nearby cities for observation and educational purposes.

There are no restrictions in this city regarding the use of the chief's car for department business. Whenever I leave to visit other departments out of the city, I place the assistant chief in charge and notify the fire chairman that I am out of the city.

J. W. Miles, Chief, Crowley, La.: Because a chief is on duty at all times and subject to respond to an alarm wherever he may be, he should respond in an official chief's car. He should, therefore, be permitted to keep the car at home.

His private car is not equipped to respond to fires. The chief would not be able to clear the traffic or make any headway in responding to a fire if he were to use his private car.

A. Z. Lokey, Chief, Greenville, Miss.: In this department the chief and assistant chief have full use of their cars twenty-four hours per day with no restrictions.

We believe the chief and assistant chief should use their cars when on fire duty and when off duty. We have a fire whistle and respond to all fires that we know about.

We do believe the chief and assistant chief should use their cars on days off. It is safer to respond to fires on days off in a fire car. It is also quicker, and we often attend to fire department business on our days off.

Lester R. Schick, Chief, Davenport, Ia.: I am of the opinion that the chief should be provided with a car for use at all times. I find this especially true in a department the size of ours. With a population of from 75,000 to 80,000, and 76 men on the department and nine pieces of apparatus, the chief is kept quite busy on administrative matters. It is very inconvenient to in-

Recent Installation of Boyer on White Model 20

BOYER HALE *two famous names that reflect Quality*

NEW Modernized Fire Fighting Apparatus embodying the famous Hale Pump is now being produced by the OLD Boyer Organization.
Write, wire, or phone your specifications and our staff will appreciate working with you. New illustrated broadside now available. Write for a copy—

H. O. DeBoer and Associates
National Sales Distributors • Lombard, Ill.

STERLING MODEL "M" GENERAL ALARM SIREN

STERLING

A NAME YOU CAN DEPEND ON

An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to install and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M." Also . . . Manufacturers of a Complete Line of Apparatus Sirens.

STERLING SIREN FIRE ALARM CO., Inc.
55 Allen Street. Rochester, New York

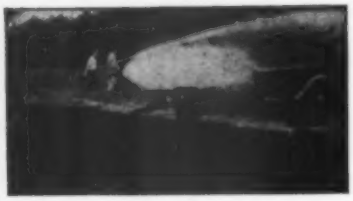
DEPENDABLE - SIRENS

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

HALE FZZ PUMPING UNIT

With a Direct-Connected 4-Cycle Air-Cooled Engine

- READY
- RUGGED
- POWERFUL
- PORTABLE



Pumping Fog and Solid Stream Through 1½" Lines

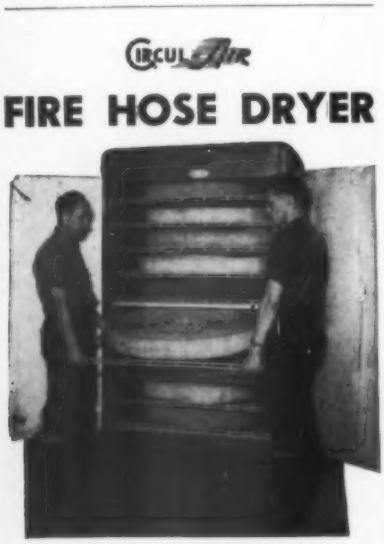
Here's a portable pumping unit every Fire Company should own—the Hale Type FZZ, available for immediate delivery. Will supply from draft 60 GPM at 90 lbs.; 150 at 30 lbs. Can be mounted on any type of equipment, handy for fighting brush fires while in motion, using booster tank for water supply.

Write for FZZ Folder to:

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.

CIRCUL-AIR

FIRE HOSE DRYER



WRITE FOR FREE BOOKLET

New 24 page booklet shows illustrations and plans of smart, new, functionally designed fire stations—made possible only because Circul-Air is compact and has proven to be the most efficient drying method ever used. Your free copy is available.

THE CIRCUL-AIR CORPORATION
575 East Milwaukee St.
DETROIT 2 MICHIGAN

terrupt conferences, etc., when alarms are sounded. It would be much better to have a separate car for the chief and the assistants. Assistants could then handle all responses, if necessary.

I feel that the chief should be permitted to keep his car at his home provided he has the proper facilities. It would enable him to respond much faster and at greater safety to himself.

I believe that he should be able to use his chief's car on his days off, due to the fact that it is equipped with radio, siren, red light, etc. He could then be in constant communication with the department in case of emergency and would properly be equipped to respond.

He should be restricted in the use of his private car for department purposes. This is especially true in Iowa as he would have no right of way as an emergency vehicle regardless of how the car was equipped. The laws of the state require that the car be a government owned vehicle.

John C. Long, Chief, Danville, Va.: I believe a fire chief should have a car to use at all times when he is on duty so that he can get to fires in any part of his city.

He should be permitted to keep the car at home at night also, because it takes time for the driver to go from the fire station to the chief's home and then to the fire. If he is permitted to keep the car at home, he can get to the fire on time.

I do not believe the chief should be permitted to use the city's car on his days off.

The chief here is not permitted to use his private car to answer calls. The risk is too great and the city is not responsible for any damage done.

T. P. Treadwell, Chief, Fort Collins, Colo.: I believe a chief should have a car for department business that is equipped with short wave radio as it enables him to make inspections and contact the business men on important public relations contacts, and still be in service for any emergency.

I do not believe he should be permitted to keep the car at home, as it causes too much gossip on the part of the public and has a bearing on their reaction to fire department costs of operation. I can see no reason why the city should provide transportation for a chief who is lucky enough to have a day off.

A private car must be equipped with red lights and siren. The city carries full insurance on it and furnishes gas and oil when it is responding to alarms or on department business.

C. A. Cunningham, Chief, St. John, N. B.: The fire chief should be provided with a car so that he may quickly respond to emergency calls.

He should be permitted to keep it at home provided there isn't a driver at the fire station.

He should not be permitted to use the car on his days off, but it should be left for the officer in charge taking his place.

His own private car should not be used except in an emergency, and if used should be covered by insurance.

William F. Garrity, Chief, Bayonne, N. J.: The fire chief should be provided with a car for fire department business. He should be permitted to keep it at his home, if his aid resides nearby. It should be used on nothing but fire department business.

JANESVILLE QUALITY TURN OUT CLOTHING

Our turnout suits are giving excellent satisfaction in most of the large fire departments throughout the U. S. and

THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

NOW AVAILABLE

We can now supply old type ¾ Length and Knee Length Felt-lined Firemen's Boots.

JANESVILLE APPAREL CO.
JANESVILLE, WIS.

"All American Choice"

Made by pioneers

in nozzle manufacture

INVINCIBLE NOZZLES

F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
Boston, Mass.
1837 — 1948

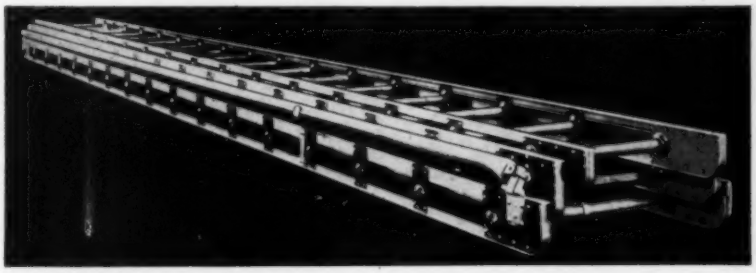
What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of April, 1948.

Month Ending April 30, 1948

Ste. Anne de la Pocatiere, Que.—Church under construction, Kamouraska County, destroyed.
Boston, Mass.—Whse. of Westinghouse Electric Supply Co. damaged.
Glassport, Pa.—Lumber yd. of Glassport Lumber & Supply Co. damaged; adj. dwelling of Mary Wernicki also damaged.
Cornwall, Ont.—Plt. of Beach Furniture Co. damaged.
Rollinsford, N. H.—Two bldgs., machine shop and smaller bldg. at Salmon Falls plt. leased by Salmon Falls Foundry Corp., destroyed.
Laredo, Tex.—Edgerton Flying Service hanger and planes destroyed.
Lancaster, N. Y.—The three-story stone home of the Lancaster Masonic Lodge damaged.
Kerrville, Tex.—The Schreiner wool and mohair whse. destroyed.
Chisholm, Me.—St. Rose of Lima Roman Catholic Church destroyed.
Hammond, Ind.—Kayes Fiber Co. plt. damaged. Sparks from welders torch.
Cohasset, Mass.—Briar Hill House owned by Anna Romanos, damaged.
Kalamazoo, Mich.—Lake Street Lumber Yard destroyed. Eight dwellings damaged.
Akron, N. Y.—Meat packing plt. of A. & A. Packing Co. damaged.
Pawtucket, R. I.—Furniture whse. of New York Furniture Co. damaged.
Moorpark, Cal.—Work shops and equipment shed on Ranch of Ray Thomas destroyed.
Tampa, Fla.—Plt. of Florida Tar and Creosote Corp. destroyed.
University, Mo.—Better Roofing Materials Co. damaged.
Clinton, N. C.—Taylor's Bridge School bldg., 10 miles away, Wilmington highway, destroyed.
Camden, S. C.—Dwelling of Richard Boykins destroyed.
Seattle, Wash.—Mail boat Chickwanna, destroyed, San Juan Islands.
Marysville, Cal.—Lumber yd. of Diamond Match Co., church, store and six dwellings, damaged. Loss includes 500,000 feet first grade lumber.
Toronto, Ont.—Rodway Co., Ltd. destroyed.
Montreal, Que.—Patenaude Bowling Alley, destroyed.
West Helena, Ark.—The Faust Lumber Co.'s band sawmill destroyed.
Chicago, Ill.—Factory of Streamlite Trailer Co. damaged.
Herrin, Ill.—Herrin Township high school destroyed. Lightning.
Des Moines, Ia.—Bldg. of J. I. and W. H. Gilcrest Co. damaged.
Weston, Mass.—Weston High School demaged.
Athol Springs, N. Y.—Lake Shore Marine Sales & Boat Livery destroyed.
Lake George, N. Y.—Forty boats, boathouse and cottage of Dunhams Bay, destroyed.
Long Island City, N. Y.—Whse. of Colonna & Co., marble importers and cutters, damaged.
Lincolnwood, Ill.—Whses. of Insulation Construction Co. damaged.
Wilson, N. C.—Plt., equip. room and offices of Service Laundry, destroyed.
Mount Pleasant, Tex.—Talco Asphalt & Refining Div. plt. of American Liberty Oil Co. damaged. Explosion.
Sultan, Wash.—Sultan Union High School destroyed.
West Chester, Pa.—Dwelling of C. Albert Fox destroyed.
Beachburg, Ont.—Nine dwellings, Renfrew County, 90 miles northwest of Ottawa, destroyed. Several other bldgs. damaged.
Montreal, Que.—Pumping station of Montreal Waterworks System, damaged.
Quebec, Que.—Joiners shop and whse. of St. Lawrence Mill and Marine Wks., Inc., damaged.
Hingham, Mass.—Commercial photography plt. of Allston Studio damaged. Adj. bldg. of Joseph Merlinox damaged.
St. Louis, Mo.—Bldg. of H. Heinrichsmeyer Feed Co. damaged.
Odessa, Tex.—Acme Lumber Co. damaged.
Grand Isle, Vt.—Cold storage plt. of Vermont Apple Co. destroyed.
Lincoln, Neb.—Mayfair Grill destroyed; also, Cheapper drug store, Self Service drug store and Kendle Bros. jewelry store, damaged.
Colby, Wis.—Elevator owned by Clark Mills, Inc., destroyed.
Dedham, Mass.—Paddock Club, dine and dance spot, destroyed.
Milwford, Dela.—Roller rink and restaurant, Highway to Lincoln, south, destroyed.
Jersey City, N. J.—Five bldgs. at plt. of Crucible Steel Co. of America damaged. Sparks from acetylene torch.

FIREMEN PREFER... Aluminum FIRE LADDERS



ALUMINUM IS LIGHT

When time is precious and manpower is at a premium, light-weight Aluminum Ladders are your most efficient life-saving and fire-fighting tools for they require fewer firemen to raise and operate them successfully.

ALUMINUM IS STRONG

Available in 1, 2, 3 and 4-section models, every Alumnium Ladder is heavily riveted and constructed of high-tensile-strength Aluminum Alloy. The corrugated rungs are securely fastened with aluminum exansion bushings, with the result that the rungs never become loose or break off.

ALUMINUM IS DURABLE

Practically all of the ALUMINUM FIRE LADDERS purchased since 1936 are still in use today. Being fireproof and rust proof they last longer than other types. Write for Complete Information.

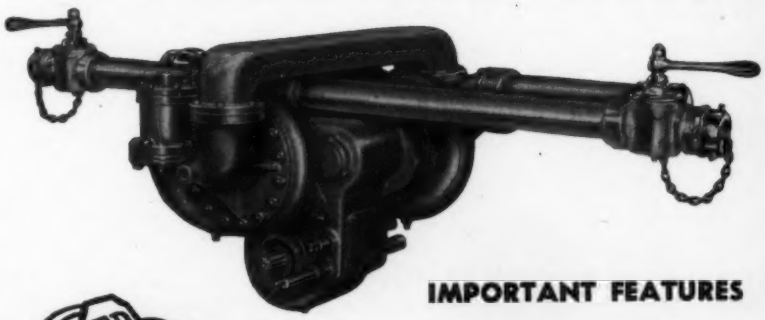
"Original Manufacturers of Aluminum Ladders"

Aluminum Ladder Company

200 Carbis Street
Worthington, Pa.

ANOTHER BARTON-AMERICAN EXCLUSIVE

—Duplex-Multistage, Centrifugal, Midship Mounted—



A Bear for Work

IMPORTANT FEATURES

1. First Duplex-Multistage Pump developed for fire-fighting purposes. 2. The only fire pump with THREE distinct operating characteristics — other two stage pumps have only two operating characteristics. 3. Two independent pumps — breakdown of one pump still leaves one in service. 4. Heavy construction for high pressure "fog" service.

AMERICAN-MARSH PUMPS, INCORPORATED
BATTLE CREEK, MICHIGAN

WENTWORTH
HEAD-MASTER
REG. U.S. PAT. OFF.
FIREMAN UNIFORM CAPS

Union Made Prompt Delivery

Wentworth Fireman Caps are made of the Highest Quality Standard Materials available. They are made in all the New and Standard styles by the Best Skilled Union Craftsmen. Over 50 years of experience and skilled workmanship guarantees you AMERICA'S GREATEST CAP VALUE in all WENTWORTH FIREMAN CAPS.

Write direct for latest circular and prices or see your local dealer.

AMERICA'S UNIFORM CAP HEADQUARTERS

WENTWORTH-FORMAN CO. INC.
MANUFACTURERS
21-25 EDINBORO ST. BOSTON, MASS.
EST. 1898

BODY-GUARD
BUNKER SUITS
FOR COMFORT & PROTECTION

WE ARE DISTRIBUTORS FOR
SIREN BOOTS

We have been supplying FIREMEN'S CLOTHING for over 25 years.

Any firemen can have a catalog by writing—

BODY-GUARD
MANUFACTURING CO.
ST. JOSEPH MISSOURI

Hamilton, Ont.—Burrow, Stewart & Milne, Co. bldg. occupied by storage whse. of Ontario Furniture Co., D. Gillies & Sons., West End Engineering Co., J. D. Aiken & Sons, Vascarb Tool & Die Co., tinsmith firm of A. Scott, and Clark Electric, destroyed.

Montreal, Que.—Office bldg. occupied by six business firms, damaged.

Oklahoma City, Okla.—Fire caused serious damage to the Folding Carrier Co. The mfg. plt. is a subsidiary of the Standard and Humpty Dumpty grocer chain. Origin believed to be spark from a welding torch in the paint dept.

Tionesta, Pa.—Plt. of Jamieson Lumber Co. destroyed.

Laramie, Wyo.—Seven business bldgs. destroyed and ten damaged.

Rockford, Ill.—The four-story Pierson factory furniture showrooms destroyed; a high south wind carried sparks from the showroom across the street to two lumber co.'s which were severely damaged. The Lawson Transfer Co. bldg., which had furniture stored in it, also was damaged. Four blocks away in a residential area, a house, a barn and three garages were destroyed.

Grinnell, Ia.—Bldg. occupied by Grinnell Axle and Body Co. and bldg. occupied by International Harvester Co. store destroyed.

Dunkirk, N. Y.—Office bldg. and adj. whse. of Seybold Bros. Sand and Gravel Co. destroyed.

Celina, Ohio—Stokely-Van Camp Canning Co., west edge of city, destroyed.

Philadelphia, Pa.—Associated Foods, Inc., candy mfrs., damaged.

Summerton, S. C.—Cotton gin of Grayson-Elliott Co. destroyed.

De Pere, Wis.—Virgil Smits' Clothing Store damaged.

Fort Worth, Tex.—Fort Worth Steel & Machinery Co. plt. damaged.

Edmonton, Alta.—Feed plt. of United Grain Growers, South side, destroyed.

Louisville, Ky.—Funeral home and hardware store of M. A. Stoess & Sons, LaGrange highway, Crestwood, damaged.

Bel Air, Md.—Korner restaurant bldg., drug stores of David Getz and Guy Fink and Jones Taxicab Co., damaged.

Detroit, Mich.—Chicago Rawhide Co. damaged. Sparks from acetylene torch.

Porterville, N. Y.—Dairy barn, milk plant on farm of Floyd A. Newburg, destroyed. Spontaneous ignition.

Pittsburgh, Pa.—Garage of Distributors Service Co., motion picture film transporters, damaged.

Martinsville, Va.—Henry County Training School destroyed.

Harvard, Mass.—Blackwell's Machine Shop of Herbert Blackwell destroyed.

Saginaw, Mich.—Parish Hall of St. Joseph's Catholic parish damaged. Defective wiring.

Hockessin, Del.—Dwelling and mushroom house of Joseph Iaconi, two miles north, destroyed. Short circuit.

Portland, Me.—Bldg. of Portland Copper & Tank Wks., Inc., steel tank mfrs. and ship repairers, destroyed.

Forest Hills, N. Y.—Hoch Radio & Television Co.; Royal Tailoring & Cleaning Shop, destroyed. Also auto showroom of Jamaica Packard Sales & Service, Inc.; the Den tavern; Garden Pharmacy; Cornelius Tichelaar's Delicatessen; Wright Liquor Store and Royal Gardens Florists, damaged.

Niagara Falls, N. Y.—Bldg. occupied by Dhane Shoe Co., destroyed. Adj. Belbot Clothing Store damaged. Defective heating system.

Schenectady, N. Y.—Dance pavilion and bowling alley, Long Branch, destroyed.

Newark, Ohio—Rod and bar mill occupied by Owens-Corning Fiberglas Corp., destroyed.

Brentwood, Mo.—Bldg. and seven boats at Barrett Boats, Inc., damaged.

Buffalo, N. Y.—Cut-off bridge of New York Central Railroad, across Scajaquada Creek, destroyed.

Eagle Pass—The Rodriguez Bros. Eagle grocery and drug store damaged.

Omaha, Neb.—Bldg. occupied by Morris Paint & Varnish Co.; bldg. occupied by Natl. Tire Co. and Midwest Distributing Co. damaged.

Cleveland, Ohio—Mayfield Country Club damaged. Grease in kitchen.

Daughpin, Man.—Central motors garage destroyed.

Riverdale, Cal.—Amarada Petroleum Corp. damaged. Storage tank fire.

Chicago, Ill.—Mid-City Processing Co. factory damaged.

Kansas City, Kans.—Laundry unit of Swift & Co. packing plt. damaged.

North Wilbraham, Mass.—Collins Mfg. Co., chemical mfrs., damaged. Solvay Peroxide explosion.

Burrillville, R. I.—Four barns at Pascoag Race Track destroyed.

Wilmington, N. C.—J. Herbert Bates Lumber Co. plt. along southern end of waterfront, damaged.

Black River Falls, Wis.—Bldg. occupied by Nelson Muffler Mfg. Co. and Upton Produce Distributing Co., destroyed.

Shawano, Wis.—Murdock Hotel destroyed.

Spooner, Wis.—Main lodge of Kilkare resort, on Birch Island Lake, twenty miles west, destroyed. Can of tar exploded.

Eliminate
your firemen's face and eye injuries! Equip their helmets with this tried and proven protector!

SAVE FACE WITH
SAFTI-SHIELD*

*Pat. No. 2421427. The most intense heat will not penetrate these Plexiglas shields. Ask any of these Departments what they think of Safti-Shield: Pratt & Whitney Aircraft Corp.; New Haven Fire School, New Haven, Conn.; Anniston, Ala.; Virginia Beach; Durham, N. C.; Asheville, N. C.; Providence, R. I.; San Antonio, Texas. Request full information from FIREMEN'S SAFTI-SHIELD CO., Inc., P. O. Box 928, Asheville, N. C.

1½" UNLINED LINEN
FIRE HOSE
At Bargain Prices

Gov't Surplus 50-Ft. Lengths
YELLOW LABEL
UNDERWRITERS
APPROVED

Unused, Clean and Fresh TOP BRANDS with Solid Brass I.P.T. Couplings

ONLY 20¢ PER FOOT

PER 50-FT. LENGTH WITH I.P.T. COUPLINGS..... $10.00

WITH N.S.T. COUPLINGS..... $13.00

Can Furnish Other Couplings

ALSO 1½" DOUBLE JACKET

Cotton and rubber lined, 50-ft. lengths. Top brand. Fresh, white and clean. 400 lbs. tested. Unused Surplus in perfect condition. Price $15.00 per length with brass I.P.T. couplings. N.S.T. or other couplings $1.50 extra.

F.O.B. Los Angeles. Terms: C.O.D.
Write for Our Other Items

HALPRIN SUPPLY CO.
837 East 4th Place, Los Angeles 13, Calif.

Convention Dates

May 28-29—SOUTHEASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Mobile, Ala. Secretary-Treasurer, Chief Walter W. Stephen, Box 904, Anniston, Ala.

June 1-4—INDIANA STATE FIRE SCHOOL. Annual meeting, Purdue University, Lafayette, Ind. For particulars, contact Robert F. Hamm, Director Fireman Training, Indiana Rating Bureau, 320 North Meridian Street, Indianapolis 9, Ind.

June 3-5—OREGON STATE FIRE CHIEFS ASSOCIATION and OREGON STATE FIRE FIGHTERS ASSOCIATION. Joint meeting, Baker, Ore. For information write to Assistant Chief Hugh B. Damon, Baker Fire Department, Baker, Ore.

June 7-9—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual meeting, Des Moines, Ia. Secretary-Treasurer, Chief Ray Tiller, Fire Headquarters, Waterloo, Ia.

June 13-16—NEW YORK STATE ASSOCIATION OF FIRE CHIEFS. Annual meeting, Buffalo, N. Y. Secretary, Chief Henry F. Drake, Clinton Corners, N. Y.

June 14-19—ALABAMA FIRE SCHOOL. Annual meeting, University of Alabama, Tuscaloosa, Ala. Secretary, Alabama State Firemen's Association, G. E. Crossett, 1915-7th Avenue, North Birmingham, Ala.

June 16—NORTHWESTERN OHIO VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Bryan, Ohio. Secretary, Earl Campbell, c/o Fire Department, Napoleon, Ohio.

June 17-19—EASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Jamestown, N. Y. Secretary, Chief Charles E. Clark, Box 271, Wayne, Pa.

June 17-19—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Hudson, N. Y. Secretary, Charles M. Fales, 92 Clove Avenue, Haverstraw, New York.

June 21-26—SOUTH DAKOTA FIRE SCHOOL. Annual meeting, Hot Springs, S. D. Secretary, Robert Hanigan, 423 West Prospect Avenue, Pierre, S. D.

June 22-24—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. Annual meeting, Wentworth-by-the-Sea, Portsmouth, N. H. Secretary-Treasurer, Chief John W. O'Hearn, 22 Mt. Auburn Street, Watertown, Mass.

June 23-25—MARYLAND STATE FIREMEN'S ASSOCIATION. Annual meeting, Ocean City, Md. Secretary, B. R. Benson III, 303 Bosley Avenue, Towson 4, Md.

July 5-July 30—ANNUAL SHORT COURSE OKLAHOMA FIRE COLLEGE. New course every Monday, Campus Fire Station, Oklahoma A. & M. College. Director, Fred W. Heiser, Oklahoma Fire College, Oklahoma A. & M. College, Stillwater, Oklahoma.

July 22-24—ASSOCIATION FOR FORMER U. S. NAVY, COAST GUARD and MARINE CORPS FIGHTERS. Annual meeting, Kankakee, Ill. Secretary-Treasurer, William J. Mignery, R. No. 5, Elkhart, Ind.

July 26-28—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. Annual meeting, LaCrosse, Wis. Secretary, Chief Arthur J. Rahn, Fire Headquarters, Two Rivers, Wis.

July 26-29—WEST VIRGINIA STATE FIRE SCHOOL. Annual meeting, West Virginia University, Morgantown, W. Va. Director, R. E. Hanna, Jr., Fire Service, Extension School, School of Mines, West Virginia University, Morgantown, W. Va.

July 27-30—DOMINION ASSOCIATION OF FIRE CHIEFS. Annual meeting, Lethbridge, Alta. Secretary-Treasurer, Chief Allan H. Clark, Fire Headquarters, Lakefield, Ont.

Aug. 2-3—WISCONSIN PAID FIREMEN'S ASSOCIATION. Annual meeting, Madison, Wis. Secretary-Treasurer, John Kromel, 717-56th Street, Kenosha, Wis.

Aug. 2-6—SOUTHWESTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting, New Orleans, La. Secretary-Treasurer, Chief G. R. McAlpine, Fire Headquarters, Oklahoma City, Okla.

Aug. 2-6—PENNSYLVANIA FIRE SCHOOL. Annual meeting, Lewistown, Pa. Director, Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Harrisburg, Pa.

Aug. 16-20—FLORIDA STATE FIRE COLLEGE. First of two sessions, Ocala, Fla. Coordinator, J. P. Britton, Florida Fire College, Ocala, Fla.

Aug. 17—FIREMEN'S ASSOCIATION OF THE STATE OF NEW YORK. Annual meeting, Rome, N. Y. Secretary, Eugene M. Braun, 4025 Main Street, Buffalo 21, N. Y.

Aug. 21—BALTIMORE COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Lansdowne, Md. Secretary, William A. Chenoweth, Milford Mill Road, Pikesville 8, Md.

Aug. 23-27—FLORIDA STATE FIRE COLLEGE. Second session, Ocala, Fla. Coordinator, J. P. Britton, Florida Fire College, Ocala, Fla.

TURN YOUR SPARE TIME INTO PROFITS
$84.00 A WEEK FROM 2 SALES A DAY
Sell RANDOLPH Fire Extinguishers

Every building holds a prospect — Homes, Boats, Cars, Garages, Gas Stations, Shops, Laundries, Farms, Hotels, Stores, Factories.

THEY WANT A RANDOLPH with its panic-proof trigger action that smothers the fire instantly in a snowy blanket of carbon dioxide. No mess, no water, no damage, even to food. It evaporates without a trace.

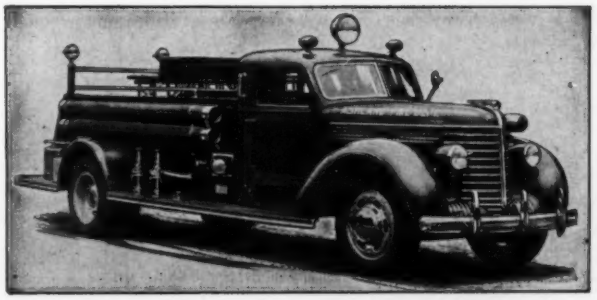
YOU CAN QUALIFY for exclusive territory to sell the famous, nationally advertised Randolph used by leading industrial concerns everywhere.

Approved by Underwriters' Laboratories

Quick profits await those who act at once. Four sales a day net $168.00 a week. Write today for full or part-time plan, territories, demonstration kit, etc. Don't delay.

RANDOLPH LABORATORIES, Inc.
19 EAST KINZIE STREET CHICAGO 11, ILLINOIS

Champion Fire Apparatus



Champion Fire Pumps

NEW 24-PAGE BOOKLET IN COLORS

Write Today For Your Copy

W. S. DARLEY & CO., CHICAGO 12

Classified Advertisements

FOR SALE
GOVERNMENT SURPLUS
½ List Price and Less

Fire Hose, 50 ft. lengths, 400 lb. test, d'ble. jacket, cotton, rubber lined, brass coupling 1½" I.P.T. unused $16, used $8 per length; 15 lb. fully charged CO-2 extinguishers $30; shut off nozzle 1½" I.P.T. $12; fog nozzle 1½" I.P.T. $25, with 4' applicator $29.35, with 10' applicator $31; 2½" N.S.T. $32, with 12' applicator $42; fog nozzle 1½" I.P.T. $26, with 10' applicator $25; 5½" extension applicator 1½" with female coupling for attaching to end of hose I.P.T. $13; air foam nozzle 2½" N.S.T. and pick up tube $35; air foam nozzle—type NPU—flexible barrel and pick up tube 1½" I.P.T. $25; fire plug strainers, quick flushing, self cleaning strainers used at the plug or in the line when fog nozzles with their small fine holes are in use 2½" N.S.T. $42.50; two stream cellar pipe 2½" N.S.T. $100; double hydrant gates (heavy weight) 2½ x 2½ x 2½ one stream into two N.S.T. $20; expansion ring hose coupling d'ble jacket 1½" I.P.T. $2, 2½" N.S.T. $3; hose jacket $30; aluminum fog nozzle, complete, shutoff, solid stream or any degree of solid conical fog 2½" $62, aluminum adaptor 4" female x 3½" male $9. Pumping units powered by 6 cyl. Chrysler T 118 engines with water cooled manifold 100 H.P. at 2850 R.P.M.. Delivers at 2400 R.P.M. 96 lb. pressure at 1⅛" tip 654 gals. per min. In use only 160 hours, perfect for fireboat, jet pile driving, waterfront use, etc. $250 ea. special price for four units. Diebold safe 31" x 31" x 45" inside 15" x 15" x 21" like new $250.

GEORGE ROGERS
1837 - 59th St., Brooklyn 4, N. Y.

FOR SALE
MECHANICAL FOAM (LIQUID FOAM)

Made by nationally known manufacturer. Government surplus, $4.50 per 5 gal. F.O.B. Philadelphia.

Prices Subject to Change.

C & L EXPORT CO.
1332 Callohill St., Philadelphia, Pa.

FOR SALE
FIRE APPARATUS AND EQUIPMENT

We have the following for sale, all in good condition:

250-400 gallon Reo Pumper	$450.00
U. S. Pumper—300 gallon	350.00
American-LaFrance 750 gallon Pumper	1,250.00
American-LaFrance 750 gallon Pumper	1,000.00
2 H.P. Federal Vertical Sirens, each	125.00
10# Kidde CO2 Exts. less horn and valve handle—fully charged, each	7.50
Rockwood 1½" Fog Nozzles, each	7.00
Foam Generator	60.00
Foam Powder—50# cans, per can	3.00
Foam Liquid—5 gal. cans, per can	3.00

For details write Box 20, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

FOR SALE
BRAND NEW—PREPAID

Red rubber lined firemen's coats, each	$17.50
Black rubber lined firemen's coats, each	15.50
White rubber lined chief's coats, each	18.50
Black unlined firemen's coats, each	13.75
2-gated leaderline siamese, chrome, each	30.00
3-gated water chief's chrome trim, each	45.00
Chimfex, 24 sticks to case, per case	24.00
Imp, per dozen, for chimney fires	7.00
3 package foam charge, 12 to case, per dozen	15.00
Carbon Tet., 12 to case, qts., per dozen	15.00
Same, 1 gallon, 4 to case, per case	16.50
2½ gal. soda acid extinguisher, complete with charge-wall bracket, each	21.50

DORAY FIRE EQUIPMENT COMPANY
1924 Valley Drive, Syracuse 7, N. Y.
Save by Mail

FOR SALE—FIRE HOSE

1½" DOUBLE-JACKET, CRL, 50 ft. lengths, with solid brass I.P.T. couplings. Only $10.00 each. Fresh and absolutely Unused Surplus, but surface soiled. Guaranteed undamaged and high test. Also perfect remnant lengths, 20' to 45', new and white at 20¢ per foot uncoupled.

HALPRIN SUPPLY CO.
837 E. 4th Place, Los Angeles 13, Calif.

FIRE APPARATUS SALESMAN

One of the largest and oldest Fire Apparatus Manufacturers is anxious to receive applications from interested parties. Please answer in full listing experience in this field. All replies held strictly confidential. Write to Box 70, c/o FIRE ENGINEERING, 24 West 40th St., New York 18, N. Y.

FOR SALE

Seagrave F Motor City Service Ladder Truck in good condition. Booster Brakes and Standard Equipment. Now in Active service but being replaced by Seagrave Aerial Truck. Address all communications to PAUL E. SCHUMACHER, CITY CLERK, CITY OF ANSONIA, Ansonia, Conn.

WANTED

Fire Equipment Dealers to sell Morning Pride protected rubber firecoats, fire pants, fire mitts and fire suspenders.

Write today Morning Pride Mfg. Co., 1936 Home Ave., Dayton 7, Ohio.

FOR SALE

1,000 gal. American-LaFrance pumper in excellent condition, reasonable. FRIENDSHIP ENGINE & HOSE CO., Merrick, N. Y.

FOR SALE

Palm Fiber Fire Broom. The Best "Fire Fighter" for Field Fires. Selected for its flexing and fire resisting qualities. Metal bound at head. Unexcelled for sweeping field fires. Made by the makers of the original fire broom. No. 62F Palm Fibre Fire Broom in lots of six or more, each $1.50. S. Ervin Diehl, Jr., 1229 N. Second Street, Philadelphia 22, Pa.

WANTED

Dealer—Distributors to sell fire apparatus manufactured by well-known Mid-West Factory. Prompt delivery. Attractive proposition. Address Box 30, FIRE ENGINEERING, 24 West 40th St., New York, 18, N. Y.

PUMPER FOR SALE

One American-LaFrance-750 GPM pumper, model 1916, for immediate sale. Rotary pump, 6-cylinder motor, hose body and chassis in good operating condition. Needs new battery. Fitted for N. Y. threads. Has been in reserve since 1940. Inspection invited (or "mail sealed offer). LARCHMONT FIRE DEPARTMENT, LARCHMONT, N. Y.

SALESMEN WANTED

Prefer Volunteer Firemen, Chiefs, Officers or members, retired or active, to handle complete line of Fire Department Supplies including hose, nozzles, coats, boots, etc. Full or part time, can be handled along with other job. Give details and reply to Box 15, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

FOR SALE—FOG NOZZLES

Solid Brass. Triple Action Type—Straight Stream, High or Low Velocity Fog. Top Brand. Unused Surplus. Complete Set, 1½" Nozzle, N.S.T. or I.P.T., 6 ft. Extension Applicator, and Tip @ $13.50. Other Threads $1.00 Extra.

1½" Fog Nozzle Above & 10' Applicator	@ $14.50
2½" Fog Nozzle, N.S.T. & 12' Applicator	@ $19.50
Full Coverage Asbestos Fire Suits	@ $8.50
Siamese Y Valves, 2½" N.S.T. Fem. to pair 1½" Males, N.S.T. or I.P.T., Brass	@ $9.00

Many other items at 25% of list. Write us.

See Ad Page 331

HALPRIN SUPPLY CO.
837 E. 4th Place, Los Angeles 13, Calif.

FOR SALE—FIRE HOSE

DOUBLE JACKET—1½" 50' lgths., top quality brands, in original factory packing, 400# factory tested, unused surplus, perfect condition. Price $12.50 per lgth., uncoupled! Can apply any coupling.

Also

1½" Single Jacket Brass N.S.T. Cplgs., lgth.	$11.00
3½" x 50' lgths. Double Jacket CRL Brass N.S.T. Cplgs., 400# Tested, lgth.	35.00
4" x 50' lgths. Single Jacket CRL Brass Cplgs., lgth.	22.50
2½" x 10' Suction Hose, Rubber Wire Inserted Cpld., Brass N.S.T., lgth.	13.50
2½" x 25' Suction Hose, Rubber Wire Inserted, Brass N.S.T. cplgs., lgth.	25.50
4" x 12' Double Jacket CRL Soft Suction Uncpld., lgth.	9.00
4" x 16' Double Jacket CRL Soft Suction Cpld., lgth.	15.00
1½" x 50' Chemical Engine Hose Wrapped Type, Cpld., lgth.	24.50
2½" x 2½" x 2½" Siamese Connections, N.S.T., each	7.50
2½" Brass Hose Nozzles, N.S.T., each	2.15

All Listed Material Unused, Perfect Condition. TOWSON HOSE & RUBBER CO., 104 W. Joppa Rd., Towson, Balto. 4, Md. Phone Towson 1672.

BOOKS

For the Modern Fire Fighter . . .

Recognized by the Fire Service as Standard

Questions and Answers for Lieutenant and Captain—$2.50

Promotional Study Course for Firemen—$3.00

Fire Chief's Handbook—$4.00

Fire Service Hydraulics—$3.00

(The Above Prices Are All Postpaid)

CASE-SHEPPERD-MANN PUBLISHING CORP.
24 West 40th Street
New York 18, N. Y.

Now GE

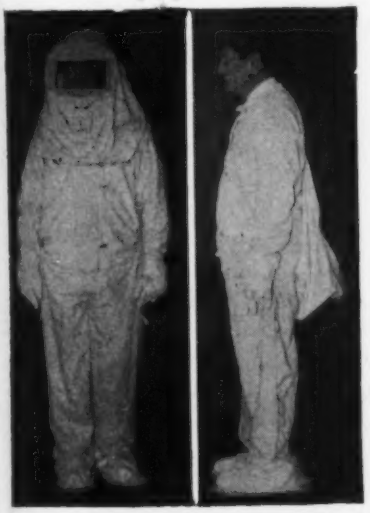
SEALED BEAM LAMPS
IN
RED or BLUE
GIVE YOU
Terrific
Maintained Candlepower
The Most Economical
and Effective Form of
Warning Signal
Full Road Coverage

Our guaranteed plastic coated lamps are in use by the State of New York and the New York City Fire Department.

To increase the reliability of your flashing lights, the Model TG flasher is also now available.

Produced by the laboratories that perfected "Puls-Lite" buoys for the U. S. Navy during the war.

SEND FOR OUR DATA SHEETS
Some territory open for agents
JULIAN A. McDERMOTT CORPORATION
40-22 NATIONAL STREET
CORONA, L. I., N. Y.



ASBESTOS
FIRE SUITS
Complete with Safety Helmet

A definite necessity in every modern Fire Department. One piece—adjustable to almost any size. Specially treated for oil and gas fires!

Unused—U. S. Navy—Spec. No. N-37-S-10.

Price $16.81 per suit

Your Department isn't complete without these suits.

or 4 for $15.81 each F.O.B. Newark

LITTLE TRADING CORP.
153 No. 12th Street, Newark, N. J.

Convention Dates

Sept. 7-9—KENTUCKY FIREMEN'S ASSOCIATION. Annual meeting, Bowling Green, Ky. Secretary, V. A. Beam, 818 Sutcliffe Avenue, Louisville, Ky.

Sept. 13-17—INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS. Annual meeting, Houston, Tex. Secretary-Treasurer, George J. Richardson, A. F. of L. Building, Washington, D. C.

Oct. 14-16—ILLINOIS FIREMEN'S ASSOCIATION. Annual meeting, Rockford, Ill. Secretary, Chief Roy W. Alsip, Fire Headquarters, Champaign, Ill.

Sept. 14-16—MICHIGAN STATE FIRE CHIEFS ASSOCIATION. Annual meeting, Sault Ste. Marie, Mich. Secretary, Chief Orie A. Hand, Lincoln Park, Mich.

Sept. 23-25—INDIANA FIRE CHIEFS ASSOCIATION. Annual meeting, Richmond, Ind. Secretary, Robert F. Hamm, Indiana Rating Bureau, 320 North Meridian Street, Indianapolis 9, Ind.

Oct. 4-7 — INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Buffalo, N. Y. Secretary, Irvin Shulsinger, 11 West 42nd Street, New York 18, N. Y.

Oct. 31-Nov. 3 — PACIFIC COAST-INTER-MOUNTAIN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Sacramento, Cal. Secretary, Jay W. Stevens, Merchants Exchange Building, San Francisco, Cal.

Nov. 9-12—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, Miami, Fla. Secretary-Treasurer, Chief Daniel B. Tierney, 8 Robbins Road, Arlington, Mass.

1.52 Firemen per 1,000 Population

The International City Managers' Association announced recently that the average American city over 10,000 population now has 1.52 full-time Fire Department employees for every 1,000 population, compared with 1.39 in 1946.

Boston leads with 2.8 firemen to each 1,000 residents. San Francisco has 2.5. Some major cities at the other end of the scale are St. Louis and Detroit, 1.1; Milwaukee and Cleveland, 1.3, and Los Angeles, 1.4. New York, with 1.5 firemen for each 1,000 population, has the largest force in the nation—11,286.

The ratio of firemen to population is not necessarily an index of fire protection at any given time, however, because the regular work week of firemen varies widely among cities.

The average starting salary of firemen has increased 24 per cent since 1944. The average rookie's salary is now $2,574 annually in cities of over 500,000 population. The average maximum is $3,204. The average Fire Chief gets $8,894 in these cities. Los Angeles pays its chief the highest, $12,400 a year.

Highland Park, Mich., and Miami Beach, Fla., pay their firemen the highest wages. They range from $3,651 to $3,818 in Highland Park and $3,060 to $3,840 in Miami Beach.

"242 Club" Elects

Officers of the 242 Club, a former New York Fire Department Emergency Auxiliary Corps organization, reelected these officers for the coming year: John Clifford, pres.; Ed. Nelson, vice-pres.; George Hurst, sec.; Ed. Hearon, treas.

The Club has responded to the New York Fire Department's announced desire to keep alive at least a nucleus of its former auxiliary corps, by instituting refresher classes, and fourteen of its members meet twice weekly for training. The Club name is taken from the number of the Company with which most of its members were affiliated as auxiliary firemen in World War II—Engine 242.

FIREMEN'S
UNIFORMS

BADGES
CAPS
INSIGNIA

Manufacturers of uniforms for over 50 years

Official Makers of Uniforms for New York City Fire Dept. and Serving Other Departments From Coast to Coast.

RUSSELL UNIFORM CO.
1600 Broadway, New York 19, N. Y.
Write for
Fire Dept. catalog No. G-57

Operate
• LIGHTS
• TOOLS
• PUMPS
• BLOWERS

Ready for instant use, Onan Electric Plants provide dependable power for floodlights and tools anytime—anywhere. These lightweight plants are easily carried into trouble areas: compact enough to fit into small space for truck installations. Portable models available in capacities from 350 to 5,000 watts, powered by one and two-cylinder, 4-cycle air-cooled engines.

ONAN ELECTRIC PLANTS—A.C.—350 to 35,000 watts in standard voltages and frequencies; D.C.—600 to 15,000 watts, 115 and 230 volts Battery chargers—500 to 6,000 watts, 6, 12, 24, 32 and 115 volts.

Plant shown is Model 15 DL-14
1500 watts, 115-volt D.C.

D. W. ONAN & SONS INC.
4533 RoyalstonAve., Minneapolis 5, Minn.
ONAN ELECTRIC PLANTS

ELKHART BRASS MFG. CO., INC.

announces

AMERICAN ELKHART COMPANY

as the

PACIFIC COAST DISTRIBUTORS

FOR ELKHART

American Elkhart Company combines...

Manufacturing and research facilities of the nationally known Elkhart Brass Manufacturing Company, Inc., organized in 1902.

Sales and warehousing facilities of American Fire Equipment Company, which has been operated most successfully on the Pacific Coast by foremost fire protection engineers.

AMERICAN ELKHART OFFICES AND WAREHOUSES

LOS ANGELES 13, CALIF.
528 Ceres Avenue

SEATTLE, WASH.
1822 7th Ave.

SAN FRANCISCO 5, CALIF.
11 Mission Street

PORTLAND 4, ORE.
819 S.W. Front Ave.

ELKHART
BRASS MFG. CO., Inc.
ELKHART...INDIANA

ADVERTISING INDEX

FIRE ENGINEERING

MAY, 1948

	Page
Acme Protection Equipment Co.	334
Aluminum Ladder Co.	337
American-Marsh Pumps, Inc.	337
Arnold, Hoffman & Co.	286
Atlas Safety Equipment Co., Inc.	334
Bar-Way Mfg. Co.	334
Beacon Falls Rubber Footwear	318
Bean Mfg. Co., John	290
Body Guard Mfg. Co.	338
Braxmar Co., C. G.	332
Briggs & Stratton Corp.	323
Buckeye Iron & Brass Works	326
Cairns & Bro.	332
Carpenter Manufacturing Co.	334
Circul-Air Corp.	336
Darley & Co., W. S.	339
De Boer & Assocs., H. O.	335
E and J Manufacturing Co.	321
Elkhart Brass Mfg. Co., Inc.	342
Emerson Co., J. H.	Inside Front Cover
Eureka Fire Hose Div., U. S. Rubber Co.	319
Federal Electric Co., Inc.	279
Federal Telephone & Radio Corp.	289
Firemen's Safti-Shield Co., Inc.	338
Four Wheel Drive Auto Co.	Back Cover
Fulton Bag & Cotton Mills	329
Fyr-Fyter Co.	330
Gamewell Co.	294
General Detroit Corp.	282
Goodall Rubber Co.	324
Goodrich Co., B. F.	283
Gorman-Rupp Co.	320
Hale Fire Pump Co.	333; 336
Halligan Tool Co.	328
Halprin Supply Co.	331; 338
Howe Fire Apparatus Co.	324
Janesville Apparel Co.	336
Koehler Mfg. Co., Inc.	322
Little Trading Corp.	341
McDermott Corp., J. A.	341
McIntire Brass Works, F. N.	336
Mack Mfg. Corp.	287
Mars Signal Light Co.	293
Midwestern Mfg. Co.	288
Mine Safety Appliances Co.	313
Motorola, Inc.	292
Obendorfer Foundries, Inc.	284-285
Onan & Sons, D. W.	341
Oren Roanoke Corp.	330
Pirsch & Sons Co., Peter	Inside Back Cover
Powhatan Brass & Iron Works	325
Quaker Rubber Corp.	314
Randolph Laboratories, Inc.	339
Rockwood Sprinkler Co.	315
Russell Uniform Co.	341
Scott Aviation Corp.	317
Sealand Corp.	328
Smith & Co., D. B.	327
Stephenson Corp.	331
Sterling Siren Fire Alarm Co., Inc.	335
Textileather Corp.	291
U. S. Motors Corp.	333
Ward La France Truck Corp.	281
Wentworth-Forman Co.	338
Wooster Brass Co.	316

A CHAMPION FOR CHAMPIONS

Pirsch is proud of the fact that Notre Dame University selected a Pirsch pumper as added equipment for its Fire Department, to protect its 100 or more buildings and an area of about 850 acres.

Responsibility of this kind is normal expectancy from a product of experience.

The pumper as shown above is equipped with a 1000-gallon Multi-Stage Series Parallel Centrifugal pump, 1250′ hose capacity body, 200-gallon booster tank, also regulation ladders and other standard equipment.

PETER PIRSCH & SONS CO. KENOSHA, WIS.

"BUILDERS OF AMERICA'S FIRST ALL-POWERED AERIAL LADDER TRUCK AND AMERICA'S FIRST 100′ AERIAL LADDER"

EVERY INCH A FIRE-FIGHTER

A Sound Investment in Fire Protection

FWD

FOUR WHEEL DRIVE
FIRE TRUCKS

The Four-Wheel Drive Auto Co., Clintonville, Wisconsin, U. S. A.

Canadian Factory KITCHENER, ONTARIO

A.